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Table of Contents.

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ORIGINAL ARTICLES— Page.
An Address, by Wilfred Vickers, D.S.O., M.B., Ch.M., F.R.A.C.S. .. 503
Workmen's Compensation for Persons Diseased other than by the Conditions of their Employment, by J. B. Cleland, M.D. .. 506
Workmen's Compensation for Persons Diseased otherwise than by the Conditions of their Employment, by S. H. Skipper, LL.B. .. 511
An Institutional Experience with Pertussis Vaccine, by Edward S. Stuckey, M.B., M.S. .. 513
Agranulocytosis following the Use of "M & B 693", with the Report of a Case Associated with Abdominal Symptoms, by Geoffrey N. Morris, M.S., F.R.C.S., F.R.A.C.S. .. 515

REPORTS OF CASES—
Case of Simultaneous Intrauterine and Extrauterine Pregnancy, by F. A. Lawes .. 518

REVIEWS—
Surgery in Emergency .. 518

LEADING ARTICLES—
The Medical Profession and Leadership .. 519

CURRENT COMMENT—
Climate and Military Preparedness .. 520
Congenital Urinary Tract Deformities and Chronic Pyuria .. 521
Alkali Poisoning in Gastric Ulcer .. 521

ABSTRACTS FROM MEDICAL LITERATURE—
Dermatology .. 522
Urology .. 523
Medicine .. 524
Surgery .. 525

BRITISH MEDICAL ASSOCIATION NEWS— Page.
Annual Meeting .. 526
Victorian Branch News .. 531

MEDICAL SOCIETIES—
The Medical Women's Society of New South Wales 532

POST-GRADUATE WORK—
Course in Medicine at Sydney .. 532

SPECIAL CORRESPONDENCE—
London Letter .. 533

CORRESPONDENCE—
Some Medical Aspects of Crime .. 533
British Medical Association Assistance to Members on Military Service, Brisbane .. 534

NAVAL, MILITARY AND AIR FORCE—
Appointments .. 534
Wireless Transmission Apparatus (Possession) Order 534

THE MEDICAL WAR RELIEF FUND .. 535

OBITUARY—
Keith Russell Moore .. 535
Reginald Horace Hill .. 536

NOMINATIONS AND ELECTIONS .. 536

NOTICE .. 536

DIARY FOR THE MONTH .. 536

MEDICAL APPOINTMENTS: IMPORTANT NOTICE .. 536

EDITORIAL NOTICES .. 536

An Address.[1]

By WILFRED VICKERS, D.S.O., M.B., Ch.M. (Sydney), F.R.A.C.S.,

President of the New South Wales Branch of the British Medical Association.

Social selfishness and abuse of privilege are diseases as troublesome as any of those described in the text books of medicine, and no one is better placed to counter them than the medical man or woman.

JOHN A. RYLE.

THOSE of us here tonight who have given any thought to the events happening in the world today, must be convinced that a very great change in the circumstances of us all is inevitable. The enormous amount spent on armaments, with the resultant taxation and the reduced income of this country due to the impoverishment of the whole world, apart from any other consideration, must lead to an alteration in our standard of living.

We must be prepared, therefore, to face many modifications of the conditions under which we practise our profession, and for that reason it is important that every one of us should devote some time to social problems as they present themselves today, so that we may be fitted to play our part in the reconstruction that must follow the present world struggle.

A very interesting book by Dr. J. Anthony Delmege, "Towards National Health", takes us from Roman to Victorian times in search of health and hygiene. In a foreword by Sir Thomas Legge the following sentence appears: "In a book like this personalities stand out prominently — the John Howards, the Chadwicks, the Shaftesburys, the Florence Nightingales—some of them born before their time." Four great social reformers! Then, as now, much of the impulse for reform came from without the medical profession, and yet there were medical men who helped to point the way for the reformers.

Dr. Percival, of Manchester, drew attention to the condition of the factory workers, particularly the question of child labour and the effect of these conditions on health. Ferrier, Currie and Haygarth are names of other doctors who were associated with establishment of fever hospitals to deal with infectious diseases.

Dr. John Simon, the first medical officer of health of the City of London, was responsible for bringing about many of the reforms dealt with by Chadwick (Secretary of the Poor Law Commission) in his historical report on the insanitary state of London one hundred years ago. Bills introduced into Parliament as a result of that report were several times rejected, but because of the work done by a number of societies the *Public Health Act* was ultimately passed in 1848. To quote from Simon:

At a time when cesspools were still almost universal in the metropolis, and while in the mansions of the West End they were regarded as equally sacred with the wine cellars, they had been abolished for rich and poor throughout all the square mile of the City of London.

John Howard, the Bedfordshire squire, was responsible for the sanitation of prisons—a reform which banished typhus.

Florence Nightingale, besides elevating nurses from the status of domestics, was responsible for the efficient way

[1] Read at the annual meeting of the New South Wales Branch of the British Medical Association on March 27, 1941.

in which hospitals are managed today. Armed with figures, she showed that as a result of her work during the last six months of the Crimean War the mortality among troops was only two-thirds of what it was among our troops at home. The mortality could come only from the grossest mismanagement. In her "Notes on the British Army" Florence Nightingale referred to Sidney Herbert as the first war minister who ever set himself seriously to the task of saving life and outlined the scheme not only of all Herbert's subsequent reforms, but of many others of the same kind. Many of these recommendations were carried out in army barracks and hospitals.

In 1860 was founded the Army Medical School which developed into the present Royal Army Medical Corps. It was due to her that the Army Medical Service formally accepted the then novel principle of disease prevention, undertaking not only the treatment of the soldier when he was sick, but the duty of safeguarding his health when he was well.

In 1802 Peel, himself a mill-owner, passed an act to improve the conditions under which children worked in the cotton mills; but this and several other acts were ineffectual because the opposition of the manufacturing interests was too powerful. It was Lord Shaftesbury who roused the national conscience to effective action. He devoted his whole life to the welfare of his less fortunate fellow men. He worked for the amendment of the lunacy laws and for the amelioration of the infamous living conditions of the rural labourer and the miner, and he played a prominent part in the sanitary improvements that were carried out at that time. Probably his greatest work was in the field of factory reform. All these reforms were bitterly opposed by the factory and mine owners, but Shaftesbury had the satisfaction of convincing them that "there was no getting more out of a human being than his constitution would fairly yield". What started as a philanthropic motive gradually became appreciated from another angle, and industry eventually realized that it was good business to keep the worker fit. Shaftesbury was responsible for this new attitude of mind.

Complex factors govern health and disease, such as poverty, general social stability, contentment, discipline *et cetera*. Many of these depend on economic conditions. As poverty causes disease and disease causes poverty, the doctor must develop wider social and economic interests. Does the medical curriculum adequately equip us and fit us for our role? Is it not a fact that the medical student is so set round with specialist studies that he leaves the university a comparatively ignorant man as regards citizenship? Would it not be wiser to devote less time to specialist studies and in their place to try to make the student a better practitioner and citizen?

There are still many problems that affect the health of the community. Can we view the present state of the housing problem with complacency? How often does one see two and three families living in a house built to accommodate one? In order to house the extra people alterations have been made in such a way that many rooms are dark and badly ventilated.

Again, blocks of land are so subdivided that dwellings are too closely built to allow adequate sunlight and ventilation. Our members have first-hand information on these matters, because they visit these homes and can see the harmful results of crowding.

Does it seem right to us that men should be unemployed—men who are willing and qualified to work? Is it right that, in this land of sunshine, with more than enough of the primary necessities to produce comfort for our seven million inhabitants, there should be so many homeless and workless and so many without any prospect of economic security? Are we quite satisfied that the people spend their money to the best advantage in food where food is plentiful? Or that enough is done to give the best nutrition to children in the country districts, where fruit, green vegetables and milk are expensive and often unprocurable?

In sparsely populated areas the problems of nutrition should be our care. Could not our local associations take up this matter? They have first-hand knowledge, they can gather the information, they can advise and direct.

Then there is the problem of medical service for the people of the outback. Why should they be deprived of the advantages of the medical attention always available for those who live in more densely populated areas?

It must be accepted that it is the duty of the State to bring adequate medical attention to every individual, while our aim should be to make this a complete medical service. The following facilities exist: (*a*) private practice, (*b*) contract practice, (*c*) subsidized medical practice, (*d*) Government medical offices, (*e*) public hospitals and State clinics, (*f*) aerial medical service, (*g*) baby health centres, (*h*) school medical service. There are also various auxiliary services.

We are concerned with two constant elements: (*a*) the physician, (*b*) the patient; but there is a variable element, the patient's capacity to pay for the service. This is mainly an economic problem, but we as medical men are qualified to play a part in its solution.

During the past twenty-five years we have seen great changes in the work of the general practitioner. The State has made many inroads on his sphere. The establishment of baby health centres and clinics for venereal diseases and tuberculosis has deprived him of many of his patients; but we realize that such centres and clinics have been a most important contribution to the health of the State and we would not alter them. Hospital out-patient departments have increased very considerably and in effect are often in competition with the general practitioner.

Some reformers would extend such services and make all treatment free to everybody. Under such conditions doctors would become officials, paid a salary to look after a certain area, and so to a large extent the vital principle of the choice of doctor by the patient would be abolished. As there would be no increased payment for greater efficiency and devotion, some of the incentive to give more time to post-graduate study would vanish. There would surely be a lowering of the general standard of treatment. Are the people willing to be regimented in this way? In this system the State makes the mistake of considering the individual as a case and not as a patient.

Under the present system the rich are able to look after themselves, the lower income members of the community can be guaranteed general practitioner service under the contract system, but the indigent are the problem.

In the big cities public hospitals have to some extent met this demand, but in the country the problem remains. It is to the everlasting credit of the medical profession that to a large extent they have given free treatment to these people in their homes and in hospitals. But as the State inroads on the income of the general practitioner become greater, and the field for contract and private practice becomes diminished, it is becoming more difficult to enlarge this free list, and it is essential that the State should realize its responsibility and relieve the medical profession of this liability.

In some countries national insurance has been tried as the remedy. With proper safeguards and administration and adequate control in which the profession is well represented, this would help to solve the problem. But we sincerely hope that no one will again try to foist on the country such an ill-considered measure as the late unlamented *National Insurance Act*. This bill was slavishly modelled on the English act, the imperfections of which had been clearly shown. This act attempted to make a hard-working section of the community (the doctors) pay for the poor crumbs of comfort grudgingly thrown by the Government to the people in the name of health, and would have so increased the work of each doctor that careful individual examination of each patient would have been impossible.

But it is not enough that we should have opposed the introduction of an act that would have reacted to the detriment of the health of the people by lowering the standard of treatment. We must be prepared to help to

frame an act that will improve the lot of every citizen and raise rather than lower that standard. Before any steps to alter the present system are taken the Government should consult the special interests affected by their legislation. The paramount consideration must be the health of the nation, and that depends on the doctors. If the conditions of service are harsh and without adequate remuneration, the best type of person will not be attracted to the profession and the public will suffer.

An advisory committee of medical practitioners should be appointed, consisting of men in contact with the problems, men who know the human side of them, not public officials only. There should be no secrecy about their deliberations and the profession should be freely consulted. In such a committee the whole atmosphere is different from the ordinary political atmosphere. The responsible minister is dealing with experts and is likely to take notice of their opinion. Such a committee would provide a channel through which informed opinion could be transmitted to the legislators in a preliminary stage. If the Government acted against the advice of the experts in such an important matter as health, the country would not be likely to forget it. I am sure the people can be trusted to prevent such legislation as would give them an inferior service to the one they already have in this country.

I feel that this new system, in order best to serve the community, must be built around our present conception of the general practitioner, it must be based on our own principles of medical ethics framed to protect the patient, and it must not lose sight of the fact that the individual is a patient—a sick person needing help—not just one of a number allotted to an area.

The general practitioner plays a most important part in the life of the community. He is the confidant of his patients, privileged to hear more secrets than the confessor. He is accepted as the friend of the family, and the more intimately he knows his patient, the more helpful he is in his illnesses, mental or physical. If he does not have the confidence of his patients he will often fail in his treatment. For this reason there must be no interference with the free choice of the doctor by the patient.

It is conceded that doctors make a reasonable living during their working years, but their hours are long and their work is exacting. Throughout the years they have made to the social service of the community a contribution which ranks higher than that of any other body of citizens, except the clergy. Much willing service is given by every member of the profession every day of his life, not only in honorary hospital work and in the treatment of indigent people (without any idea of recompense), but in committees that have for their object the improvement of the lot of the less fortunate, and in the spending of much leisure and capital in post-graduate work to ensure professional competence.

Nor can we overlook the enormous contribution to the relief of human suffering made by those unselfish workers in the field of research, men whose reward has usually been little more than the satisfaction of a job well done.

But have we individually done as much as we could to help to solve these problems I have mentioned? In this respect I want to quote from an address by John A. Ryle, Regius Professor of Physic in the University of Cambridge, consulting physician to Guy's Hospital:

> By one means or another you must develop the social conscience, which has, in the view of many of us, been too little evident in the years preceding the war. Although there have always been noble and notable exceptions in every community it has seemed to me that medical students and doctors as a body, excusing themselves on the grounds of their many preoccupations with the curriculum or the anxieties of practice, have held themselves too much aloof from the larger social problems. Social selfishness and abuse of privilege are diseases as troublesome as any of those described in the textbooks of medicine and no one is better placed to counter them than the medical man or woman. I do not ask you necessarily to ally yourself with any particular political creed, but I do ask you to be seriously interested in man's environment and the possibilities of its improvement.

I wish I could take every one of you for a walk through some of the poorer districts of London, not only to see the havoc that has been wrought there and the wretched conditions in which thousands of amazingly courageous and uncomplaining people of the working classes are herded together nightly in their shelters, but more particularly to see the disgraceful conditions of housing which have been allowed to persist so long in twentieth-century England. Hundreds of lids have been lifted from hundreds of squalid homes by high explosive. Here, but for the inhuman crulety of it all, the bombs might almost be deemed to have done a useful service. Alas, that they should also have cracked or flattened many beautiful blocks of modern flats for working folk that do great credit to the London County and the borough councils, and remind us that in our own lifetime progress has launched a great offensive for the next generation, for your generation to carry through.

A natural corollary to this quotation is one from Laski's "Grammar of Politics":

> There is in the world a growing impatience at the exploitation of man by man. There is a fuller sense, more widespread and more deeply felt, that the inheritance of the world is not the possession of a few, and that for the others life is merely an endless toil. We have discovered the significance of equality and its demands upon us are not likely to be less than the demands we have known in the name of freedom.
>
> It is the paradox of self government that to be free we must share with others in making the rules of fellowship among men. But life has taught us in the sternest way that without those rules there will be no fellowship and without fellowship there will be no freedom. Either we have to make the world by deliberate plan or we court disaster. It is a grim alternative. It makes men feel how near their feet lie to the abyss. But it is also an alternative that may prove the pathway to their salvation.

We should recognize that we are a selected community, to enter which we have had to attain a standard of education necessary for matriculation and then to go through five or six years of training and to pass many examinations. This has given us a place in the community that commands respect. Part of this we owe to our parents, who gave us the wherewithal to steer us through our student years; but the system under which we live is also responsible—this system which makes it possible for us to be kept during our years of training without our putting anything back into the pool, which enables us to know that we can reasonably expect protection for ourselves and our possessions, and which permits us to move from place to place in comfort and security.

Is there such a thing as complete and absolute individual freedom? Is it likely that any system resting on such a doctrine can endure? It may be answered that to be a medical practitioner doing your best for the people is sufficient repayment; but cannot the same be said for a good carpenter or a good farmer?

Is it not essential that we should use our trained minds to do something, to give something which those others may not be able to contribute so well? If this be so, then as individuals and as a profession we are evading our responsibilities if we continue to be complacent about those problems which so obviously concern us.

It is probable that our organization has been too centralized. Although it is essential that the Council should direct the affairs of the Branch, it would assist greatly if it had more help from individual members.

I would suggest one method in which this might be done. The Council has established a Committee of Medical Sociology and Research. That committee has arranged for some interesting broadcasts on health that have had an excellent hearing. Could not this committee be extended with a subcommittee in each local association? These subcommittees could collect information on some subject of particular interest to that district and of which their members had special knowledge. Their conclusions could be dealt with at a special meeting of the Branch. Each medical practitioner would have his attention directed to some of these subjects, and the result would surely be a greater interest on his part and the wider dissemination of knowledge that would assist in bringing about reforms; and when the comment is made that local associations consist of busy general practitioners, I would

remind you that very many general practitioners have found time to be members of Council.

The trend of all legislation has been to produce higher wages and shorter hours. The standard of living has improved and the comfort of the people increased. But is it not our duty to educate the people to spend their wages more wisely and their leisure more profitably? Has not our profession a duty in this matter? Should we not make it one of our aims to bring to the outback as many of the amenities of life as is possible, in the way of education, medical attention, hospitals, water supply, sewerage, amusements *et cetera*, as are enjoyed in the big cities. This should not be a political issue, but a national matter dependent on a well-informed public opinion.

Let us tell the Government that our special knowledge is at their disposal in all these matters, that we will continue freely and willingly to give our services and our research to the improvement of the lot of the less fortunate members of the community. Let us tell them that we realize that we must face great changes along with our fellow citizens and that we are willing to cooperate in a new social order, knowing that it means the sacrifice of some of our privileges; but let us tell them also that we will not work under any system that we know will result in less efficient health service to the community.

We shall of necessity be among the actors in the drama of evolution of which this war is merely an act. We must qualify for our part, and the part we must play is citizenship.

Let us apply our science and our humanity to the salvage of such remnants of ordered society as this calamity leaves. Our scientific work is directed towards the health of the people and the treatment and prevention of disease. By our humanity we can assist in tempering the effects of ill health and in increasing the sum of human happiness.

WORKMEN'S COMPENSATION FOR PERSONS DISEASED OTHER THAN BY THE CONDITIONS OF THEIR EMPLOYMENT.[1]

By J. B. Cleland, M.D.,

Marks Professor of Pathology, University of Adelaide.

Biologically it is the duty of every individual to keep himself in perfect health and free from disease. This, of course, applies to all living creatures, though the degree to which they can themselves actively contribute to this result varies greatly, from the mere avoidance of an enemy who may be capable of causing injury (that is, disease) or the withdrawal of themselves from the cause of unpleasant stimuli, up to the highly purposive activities of civilized man. It is the duty of the State to see that individuals take reasonable measures to conserve their own health and that they do not do anything which may be injurious to the health or welfare of other people. The State's activities, in this latter direction of protecting others, are legitimately much more active than in the conservation of what one may call the private health of the individual. Inherent in this duty not to cause injury to the health of others is the requirement that employers should take all reasonable measures to protect their employees in conditions that may adversely affect their health. The point I should like to emphasize is that the duty first lies on the individual to keep himself in good health and that the liability, biologically speaking, is not primarily on the employer or on the State to see that the necessary conditions are fulfilled. If the individual fails to do his duty in this regard, then it is, from the social aspect, the duty of the State to insist on any measures that may be necessary to achieve the desired end. The State cannot tolerate conditions which tend to lead to inefficiency in its members.

Theoretically, then, any person presenting himself for employment should be presumed to have taken all reasonable measures to conserve his health and to ascertain that he is physically fit for the work intended. It is really his duty to see that adequate medical inspection has been made according to his age and circumstances. As human beings are likely to be negligent in this regard, and may be unaware as age advances of their liability to develop various lesions, it may be advisable, and in some cases it may be imperative, for the employer to carry out further medical supervision. An extreme degree of this is seen, of course, in the necessary fitness in every direction required of members of the Air Force. I should like again further to emphasize here that the primary duty is on the individual, and it is a secondary duty for the State and for the employer to see that this primary duty is undertaken.

In the compensation of workmen it is quite clear and reasonable that compensation in some way to them, if they are still living, or to their dependants if they are dead, should be made for any injury or disease which is clearly due to the special nature of their occupation. To induce people to enter hazardous occupations the remuneration for such may be above that of similar but less dangerous work. From the point of view of compensation to some extent this increase of wages may be set against the increased risk. If the increased wage was sufficiently high, then no compensation should be necessary; but in practice this can rarely be the case.

A leading article entitled "Compensation for Industrial Diseases" in *The British Medical Journal*[(1)] sets out the position as regards compensation so clearly that I cannot do better than quote it:

> Workmen's compensation in this country [Great Britain] is based upon a special statutory liability of an employer to compensate a workman or his dependants for the results of injury by accident arising out of and in the course of his employment. The question soon arose whether compensation could be claimed when a workman caught an illness at work. The scope of the word "accident" was found not to be large enough for the social requirements of the case, and special legislation was passed to make an industrial disease contracted under certain conditions an accident for the purposes of the Act. A schedule to the Act contains a large number of industrial diseases, and fresh ones are added from time to time as they become known. Dr. J. Leclercq, dealing with the position in other countries, says that most industrial nations have legislation for this purpose, but some of it is open to improvement. There are many advocates in this country [Great Britain] of the plan, practised by most of the United States and by Germany, of complete indemnity through insurance. Dr. Leclercq points out that the fundamental objection to this method is the uncertainty of diagnosis and of the causal relation between many processes and industrial disease. It is unjustly expensive to industry. That is why most European nations prefer a system which limits the risk and the burden. The French, Belgian, and Italian laws are similar to ours. In Switzerland compensation is covered by a "Caisse Nationale". There is a list of about ninety substances which are considered harmful, but this is not exclusive, and when a malady is clearly due to an occupational condition the Caisse will allow compensation. There is no list of ailments; the practice is to pay compensation for any disease which is an industrial one—a very common-sense attitude. If a disease is not due entirely to the occupation, but partly to some predisposition in the workman, the compensation is reduced in proportion. We take a more beneficial view here, and say that if the work materially contributed to the illness full compensation should be paid. Japan relies on a list of industrial diseases, as we do. Dr. Leclercq lays stress on the great difficulty of establishing a causal relation between the occupation and the illness. This lies at the root of all systems. There is no department of law or social life in which the medical profession plays a more responsible part or has a wider and more urgent field of enquiry.

Another quotation, also from *The British Medical Journal*,[(2)] shows in an amusing way the caution that it may be necessary to exercise at times in the application of statistics to subjects such as the one before us:

> Miss E. M. Newbold contributes an excellent paper on the pitfalls awaiting the interpreter of industrial sickness

[1] Read at a meeting of the Medico-Legal Society of South Australia on February 14, 1941.

statistics. She repeats the old but frequently forgotten caution that correlation does not necessarily imply causation, and culls the following excellent instances of high correlation—between the secular course of expenditure in the navy and the consumption of bananas, between ability to speak Dutch and a low rate of mortality from cancer of the breast, and between the amount of calcium in one's bones and the number of nephews and nieces one has!

The circumstances with which I have to deal comprise those cases in which diseased conditions are present in individuals which are not directly due to the conditions of their employment, but which may have to be considered from the point of view of whether their employment has accentuated these conditions or perhaps has been responsible, or seemingly responsible, for a final fatal outcome. We begin to grow old even as soon as we are born, for even at birth we discard certain structures of our body. Throughout life we are exposed to injuries and infections and the products of metabolism gradually clog the biological machinery. From the age of forty years onwards pathological changes become increasingly manifest, and in the fifties few if any of us are free from some lesions. We are therefore more particularly concerned with individuals in the age groups over fifty. The diseases occurring amongst these which may have a bearing on workmen's compensation comprise more particularly atheromatous changes in the blood vessels, particularly those of the heart, in which coronary disease may result with infarction of the heart muscles, and those of the cerebral vessels, which may lead to cerebral hæmorrhage, and high blood pressure, and syphilitic disease of the aorta leading to aneurysms.

I have adopted a system at the Royal Adelaide Hospital of tabulating the pathological lesions found at autopsies. A summary is given at the end of the record of the post-mortem examination showing the important lesions that were present, arranged either in order of importance or in order of sequence. Trivial lesions are, of course, not included. Such summaries, including the age and sex of the patient and the reference number of the post-mortem examination, are typed out in multiples and the whole of the summary is pasted on cards under the headings of the lesions found. For instance, supposing a patient dies of cerebral hæmorrhage and has also gall-stones and atheroma of his abdominal aorta, then his summary will appear on the cards for cerebral hæmorrhage, for gall-stones and for atheroma. It will be seen with this classification that one can rapidly obtain information as to the prevalence of the various diseases and their distribution amongst the sexes and at various ages. The results in series of thouands are tabulated and published in *The Medical and Scientific Archives of the Adelaide Hospital.* The fourth thousand has just been completed and part of the results have been published. I have extracted from this mass of information some details that may be of interest to us in the subject under discussion.

The Incidence of Atheroma with Advancing Years.

An analysis of the cases recorded under atheroma of arteries in the second and third thousand post-mortem examinations is given in Table I.

Under the age of fifty years there were two male subjects aged twenty-four years, one aged twenty-nine, one aged thirty-two, one aged thirty-six and nine in the forties, a total of 14; the female subjects were aged thirty-two years, thirty-seven years, and five were in the forties.

It will be seen that in the age group fifty to fifty-nine years approximately one in seven individuals who died showed pronounced degenerative changes in the larger blood vessels, in the aorta, in the arteries of the heart or in the cerebral vessels or in several or all of these. In the age group sixty to sixty-nine years one in four showed these advanced changes, and in the age group seventy to seventy-nine years nearly half showed lesions of sufficient magnitude to require their being specially recorded. It will be seen that these atheromatous changes may be met with sometimes in young persons; there were, for instance, two males aged twenty-four years and another aged twenty-nine years, a male and a female aged thirty-two years, and so on, who had atheromatous changes at an early age. One can infer from the above figures that of persons in employment in the age group fifty to fifty-nine years, one in seven will have atheromatous changes in some part of his vascular system. These changes may be so situated, as for instance in the abdominal portion of the aorta, that they do not seem to play any prominent part as a rule in leading to injurious effects or in inducing a fatal issue. On the other hand, atheromatous changes in the smaller vessels of the heart or the brain may be of serious import. It may happen, of course, that a localized atheromatous change in a particular situation may give rise to trouble, though the change in general in the individual's vessels may be negligible. Examinations of these persons may fail to reveal any conclusive evidence of these changes, so that a medical examination, however careful, may not detect them, and it is only the age of the subject which may suggest their presence. Sooner or later some of these people are sure to be the subjects in cases in which compensation has to be considered; yet these changes cannot in any way be attributed to the nature of the work.

Atheroma, Cerebral Hæmorrhage and High Blood Pressure.

The patchy, degenerative change of atheroma in the cerebral vessels may give rise to cerebral softening or cerebral hæmorrhage. Cases of cerebral hæmorrhage are probably usually fatal in the course of a few days. Patients who have "a stroke" and recover have probably suffered from cerebral softening, not cerebral hæmorrhage. In cerebral softening the vessel becomes occluded, probably by a clot, and I can see no association between a stroke due to such a cause and the work done by the individual. The final obstruction of the vessel is, I think, more likely to occur during periods of quiet than during times of activity, and consequently the work on which the person was engaged would be more likely to stave off rather than encourage the formation of such a clot. The position as regards cerebral hæmorrhage is more complicated. I have abstracted the age periods and sexes of our subjects of cerebral hæmorrhage examined *post mortem*, and it will be seen (Table II) that a large number of these hæmorrhages

TABLE I.

Pronounced Atheroma at Various Age Periods in Two Thousand Autopsies (Second and Third Thousands).

Sex of Subject.	Age in Years.					
	50 to 59.		60 to 69.		70 to 79.	
	Number of Subjects.	Number of Autopsies.	Number of Subjects.	Number of Autopsies.	Number of Subjects.	Number of Autopsies.
Male	37	229	67	284	96	207
Female	15	128	31	117	26	53
Total	52 (1 in 7)	357	98 (1 in 4)	401	122 (1 in 2·1)	260

TABLE II.

Cerebral or Cerebellar Hæmorrhages from All Causes (Fourth Thousand).

Sex of Subject.	Age (Years).														Total.
	15.	19.	25.	27.	28.	36.	37.	38.	40 and Over.	50 and Over.	60 and Over.	70 and Over.	81.	86.	
Male ..	—	—	1	1	1	1	1	1	6	11	7	2	—	1	33
Female ..	1	1	—	—	—	—	—	1	14	6	4	4	1	—	32

occur during the active portion of a person's life, and consequently may have to be considered in claims for compensation.

The figures are of considerable interest. Though we have approximately twice as many post-mortem examinations on men as on women, the incidence of hæmorrhage into the brain was about equal in the two sexes. The fact that the lesion is commoner in women suggests that strenuous muscular effort does not play an important predisposing part, at least in many instances. No less than 23 out of the 33 examples in men occurred in persons aged under sixty years—that is, during the period when they were likely to be employed. I have, however, no information as to how many were engaged in work at the time of the seizure.

Two important factors contribute to cerebral hæmorrhage; one is an atheromatous change in the cerebral vessels, already mentioned, and the other is a high blood pressure, a condition which is very common in the community in the later decades of life.

My figures show that in the last 1,000 post-mortem examinations, the results of which were tabulated, no less than 43 (that is, 4·3% of subjects) had hypertrophied hearts attributed to high blood pressure, and final heart failure, and that another 20 (that is, 2%) had hypertrophied hearts due to the same cause and hæmorrhage in the brain. The age groups of these individuals (Table III) show that many of these persons died at a still active period of life. To what extent may strenuous work and effort have contributed to the bursting of the blood vessel in these latter cases? Increased effort must obviously, to some extent, raise the blood pressure, and an increase of blood pressure would be expected to facilitate the rupture of the vessel; but cerebral hæmorrhage may occur at night when no special effort is likely to have been made, though the body is recumbent and consequently the blood can be supplied to the cerebral vessels at a higher pressure than when the subject is in the upright position. Again during the course of twenty-four hours, increased effort is frequently being made by almost all of us, as in straining at stool in cases of constipation, in climbing up stairs and in running for trams. A person who is going to have cerebral hæmorrhage from the combined effects of high blood pressure and atheroma is probably going to suffer this fatal effect whether he remains quiet or carries on his ordinary avocation. Like the old gladiators of Rome, he might say, if he knew of his condition, "*moriturus sum*". If the fatal event occurs associated with his work, I do not think there is any title to compensation. It is possible, of course, that the work may have precipitated death by a day or so and some compensation may perhaps be justifiable for those two or three days or possibly a week. But why should the fortunate dependants of the man who has a stroke due to a cerebral hæmorrhage during the course of his work receive compensation, whereas the unfortunate relatives of his fellow, who has been engaged in the same work, but has his cerebral hæmorrhage at home in bed at night, receive nothing? The law and compensation must be reasonable and fair to all. If compensation was paid in respect of everyone who died from natural causes whilst being employed, the matter might be different.

Coronary Disease.

Authorities in general consider that coronary thrombosis has no relation to effort. A recent opinion has been expressed that any relation there may be to effort is not related to strain immediately preceding the onset of symptoms, but to strain experienced perhaps twenty-four or forty-eight hours previously. Master, Dack and Jaffe[3] have made an analysis of 530 attacks diagnosed as coronary artery thrombosis. They found that 21·7% occurred whilst the patient was at rest, 19·6% during sleep, 18% whilst walking, 13·6% during ordinary mild activity, 5·3% during moderate activity and 2·1% during unusual or severe exertion; 1% were associated with trauma, 5·3% occurred during or after a meal, in 5·1% of cases there had been excitement, either mental or emotional, and in 5·1% there was no definite onset. They consider that the occurrence in 40% of cases during rest or sleep was probably a mere coincidence and not really affected by the resting condition. Amongst their conclusions they considered that no specific

TABLE III.

Age Group (Years).	Condition.					
	Hypertrophied Hearts from Hyperpiesis: Heart Failure.		Hypertrophied Hearts from Hyperpiesis: Cerebral or Cerebellar Hæmorrhage.		Hypertrophied Hearts from Hyperpiesis: Cardiac Infarction.	
	Male.	Female.	Male.	Female.	Male.	Female.
10 to 19	1	—	—	—	—	—
20 to 29	1	—	—	—	—	—
30 to 39	4	—	—	—	—	—
40 to 49	2	—	1	4	—	—
50 to 59	10	3	4	3	3	2
60 to 69	11	—	3	2	6	2
70 to 79	7	2	1	1	1	1
80 and over	1	1	—	1	—	1
Totals	37	6	9	11	10	6
	43		20		16	

factor precipitates an attack, and that exertion, mild or severe, was of little or no significance in this connexion.

A leading article in THE MEDICAL JOURNAL OF AUSTRALIA[4] reviews the above work and other investigations and opinions recently expressed. It is pointed out that there are several investigators who consider that there may be, or that there is, an association at times with effort; but these are in a considerable minority, and the article concludes with the view that "until convincing and irrefutable evidence is found to the contrary it should be accepted as a working rule that effort has no part whatever in the causation of coronary thrombosis".

Looking up the histories of some of our proved cases of cardiac infarction, I find that in 16 instances there are notes as to what the patient had been doing at the time of the onset of the severe pain, or other evidence suggesting that thrombosis had just occurred. Placed in order according to the time of day, the onset in these cases was as follows:

Before going to work, increasing when the patient mounted his bicycle.
10 a.m., on board ship.
Mid-day, the patient walking round his home after digging in his garden.
2 p.m.
The patient was sitting down and attempted to rise.
Whilst the patient was walking.
Whilst the patient was going about her home duties.
6.30 p.m., while swimming.
8 p.m., sitting in a chair.
Seated at a table in the evening.
10 p.m.
11 p.m. (died suddenly sitting on a bed-pan eight days later).
Midnight.
"Middle of the night."
"Last night."
3 a.m.

From this it will be seen that seven cases of cardiac infarction occurred apparently during the day time up to 6 p.m., five occurred in the evening up to 11 p.m., and four occurred presumably whilst the patient was asleep. From the above 16 examples there is no indication that undue effort was in any way responsible for the coronary thrombosis and resulting infarction.

An epitome is given in *The Australian Law Journal*[5] of a legal decision on a South Australian case, in which a man died from coronary thrombosis just after considerable exertion. The circumstances, as given in this epitome, were as follows:

F. was employed by a company as a waterside worker and winch man. On 4th June, 1938, he started work at 8 a.m. and, until he died at about 4 p.m., he appeared to be in normal health. At about 4 p.m. the wire ran off one of the sheaves on a crane which F. was operating. He climbed up the lattice work of the crane and attempted to replace the wire. This was a job which required much exertion and he was in an awkward position to perform it. After a few unsuccessful attempts he came down again, and decided to leave the job to the crew whose function strictly it was. He gave every appearance of being quite normal. He was then instructed to assist to pull down the wire of another crane. He began this job, which meant that he had to pull the wire with his hands over his head and which needed effort. When this pulling, for all practical purposes, was completed, F. walked away. Another man who was working face to face with him noticed nothing wrong with him. Within a few seconds of his ceasing this work, however, during which time he had walked about twelve yards, he fell down. He lost consciousness and died within a very short time. His death was due to coronary thrombosis.

The special magistrate who acted as arbitrator found (and though I was a witness in the case, I think I can say with authority and without bias that this finding sums up the position very accurately indeed) that:

On the science of medicine as I find it on the evidence before me, death from coronary thrombosis cannot generally be related to exertion, but that death in such cases is a mere happening in the chronological order of things. If death does occur concurrently with or closely connected in point of time with exertion, it cannot satisfactorily be said to have been caused by such exertion . . . I am unable to connect [the exertion with the death] in such a way as to say the exertion caused the death.

On appeal to the Supreme Court of South Australia the decision was given against the stevedoring company concerned. In their reasons for the judgement the judges said:

Speaking generally, it must be difficult and probably impossible to relate an attack of coronary thrombosis to any particular activity of the patient, and we concede that, even in this case, it is difficult to feel any great confidence in the inference, but it seems to us that we have here the coincidence of strenuous physical exertion occurring at or about the time when the thrombus must have commenced to precipitate. If the expert evidence shows, as we think it does, that physical effort is commonly—although not invariably—the inciting cause of that phenomenon, we think we are entitled to draw the inference that [an expert witness] felt unable to draw. We fully accept his view that the evidence is in some measure inconclusive. For the purposes of a scientific deduction it may be insufficient, but . . . Courts of justice are entitled and bound to act upon the probabilities of the case.

I cannot agree with the reason given above, as I know of nothing to support the view that physical effort is commonly the inciting cause leading to the incidence of a thrombus, whether situated in a coronary artery or elsewhere.

The employers appealed to the High Court, who upheld the decision of the Supreme Court by a majority of three to one. Mr. Justice Rich said that he did not see why a court should not begin its investigation (that is, before hearing any medical testimony) from the standpoint of the presumptive inference which the sequence of events would naturally inspire in the mind of any commonsense person uninstructed in pathology. Why should not a court say that there was strong ground for a preliminary presumption of fact in favour of the view that the work materially contributed to the cause of death? Expert opinion showed no more than that current medical views found insufficient reason for connecting coronary thrombosis with effort. This was not enough to overturn or rebut the presumption which flowed from the observed sequence of events. While science presented no more than a blank negation, one could only await its positive results and in the meantime act on one's own intuitive inferences.

Surely Mr. Justice Rich's suggestion that in a case such as this the court should start off with the presumptive inference inspired in the mind of a commonsense person who knows nothing of the causes of death is a dangerous one to follow. The first thing to do is to ascertain the actual cause of death, which as a rule a post-mortem examination alone can ascertain. The next thing is to determine, as a result of collective experience of many cases, the factors associated always, usually or rarely, with that cause of death. One has then to consider whether a factor rarely associated can be reasonably considered in the case under review to have been in any material way responsible, or whether the association is merely accidental and occurs in a frequency explainable on the doctrine of chances. In the determination of all these points the opinion of the commonsense layman can play no part. His preconceived ideas, of which it is so difficult to disabuse him, may actually do harm by obfuscating the issue. I am reminded of a case recounted by Dr. A. A. Palmer, of Sydney, whose experience in medico-legal post-mortem examinations has been very great. It was to impress upon my mind the danger of rash inferences from the circumstances surrounding a death.

A dead body was recovered from the water at Manly. There were no external marks of violence. The natural inference was that death was due to drowning; but a full post-mortem examination, including the opening of the skull (which in coroners' cases must never be omitted), showed that the man had apparently waded into the sea and shot himself through the mouth with a revolver.

In a case such as the one of coronary thrombosis under discussion, both the arbitrator and the courts of revision should have been assisted in coming to a correct opinion on the conflicting medical evidence by some level-headed medical man with extensive pathological experience qualified to assess the whole situation.

Aneurysms.

Aneurysms of the aorta due to syphilitic disease are important subjects for the consideration of compensation. The number now will probably steadily decrease as the result of better treatment of the primary disease. Whatever may be said to the contrary, the majority of cases of syphilis are due to social misbehaviour. I say this on biological grounds as well as on ethical grounds. Aneurysms tend to enlarge progressively, causing atrophy of the tissues over them. Eventually rupture is likely to occur with a rush of blood and an immediately fatal issue. When such an aneurysm in the old days eroded through the sternum and burst externally, the end was dramatic and ghastly. The aneurysm may grow in other directions and project into a bronchus or the œsophagus or the pleura.

I remember performing a post-mortem examination on the old pilgrim road from Dover to Canterbury in the barn of a wayside inn, on a man who had walked in and asked for a mug of beer. As he was raising it to his lips, a gush of blood came forth and he was dead. His aneurysm had burst into a bronchus.

It may be suggested, if an aneurysm burst whilst the person was being employed, that the extra blood pressure caused perhaps by some strenuous work may have been a determining factor as to the time of rupture. It might be argued, of course, that even if such increase of pressure did occur, transmission to the place of rupture through layers of fibrin would be difficult. I do not think these persons should be entitled to compensation. They are about to die in any circumstances. It is very doubtful whether any kind of work will really accelerate such death; even if it did the only reasonable compensation would be the equivalent of a day or so of life.

Retention of Urine from Enlarged Prostate after an Accident.

Mr. Pomroy has told me of a case, reported somewhere between 1923 and 1927, the reference to which I have been unable to find.

The patient was the victim of a genuine accident at work, something in the nature of a broken leg. Whilst laid up in bed as a result of the accident, he had acute retention of urine from an enlarged prostate. His bladder had to be catheterized and finally he died from infection or some other cause attributable to such retention. On the ground that he would not, or might not, have had such acute retention if he had not been confined to his bed by the accident, full compensation for his death was granted.

I quite agree that a patient confined to his bed as a result of an accident who dies from hypostatic pneumonia, which could not have developed had he not been so confined to bed, is entitled to compensation. The fatal lesion has arisen *de novo* as a direct result of the accident. Compensation is rightly allowable if, during a necessary or any operation entailed by the accident, the patient dies under the anæsthetic. But that a man with an enlarged prostate, so common after the age of fifty-five years, of such a nature (that is, the enlargement so situated) as to lead to acute retention sooner or later, is entitled to compensation, I very much doubt. A medical man, asked if it were possible that acute retention would never have occurred (at or about that time) if the patient had not been confined to his bed, might quite readily admit that that was a possibility, but would surely qualify the statement by saying that very probably such acute retention would have appeared somewhere about that period of time whether the accident had happened or not.

Anthrax.

More than twenty years ago in New South Wales I was a Crown witness in the case of the claim by a widow for compensation for the death of her husband from anthrax. The verdict in favour of the widow was, I feel sure, a wrong one. I felt rather "sore" at the time at some remarks made by the respected judge (now dead) before whom the case was heard. Though not perhaps put into so many words, the inference from what he said was that my evidence was special pleading to save the Government the cost of compensation. The facts were substantially as follows.

The man died from anthrax, which my evidence proved. The malignant pustule was on the neck within the shaving area. At that time we had just begun to recognize the occurrence of anthrax infection from certain Japanese shaving brushes. I tendered my opinion that such a source of infection was probably responsible in this case, a source unconnected with the occupation of the man, who was engaged in lumping wheat at Darling Harbour after it had been reconditioned in the country at the end of the mouse plague. The suggested course of events submitted by the other side was that in carrying a bag of wheat on his shoulder, a prickle on the outside of the bag had made a small wound, that the wheat had probably come from a country district in which anthrax in sheep was known, that mice had fed on an anthrax carcass in the field, that they had later entered the stacks of wheat and died from anthrax amongst the bags, that anthrax spores from their putrescent carcasses had contaminated the dust, that some of such infected dust had accompanied the wheat when it was rebagged, and that this same infected dust had worked through the bag during transport and was ready at hand to enter the wound made by the thistle on the outside of the bag.

Yellow Fever.

Recently compensation was granted to the mother of a sailor who contracted yellow fever on the west coast of Africa. It was held that the bite of a mosquito, which introduced the virus of yellow fever, was an accident in the meaning of the *Workmen's Compensation Act*.[6] In my mind I rather doubt whether the verdict was logically a correct one. The ship certainly visited a more dangerous part of the world than temperate climates, exposing members of the crew to certain risks. Another vessel might visit another part of the world where venereal disease was more rife, and thus where the crew might be exposed to greater risk in this respect. The sailor presumably had twelve hours off duty each day. If the yellow fever mosquito had bitten him when he was off duty, would he be entitled to compensation merely because he was in a more dangerous part of the world? Smallpox and plague are frequently present in the cities of India and in China; infection may be contracted by members of the crew during the stay of vessels in these parts. In the case of plague, the bubonic type is due to the bite of a flea. If an infected flea bit a member of the crew during his period on duty, would he be entitled to compensation, and not so entitled if it happened to bite him when he was resting in his bunk when off duty?

Malaria.

In *Nature*[7] of June 1, 1940, the following note appears under the heading of "Malaria as an Occupational Disease":

In his inaugural thesis (*Thèse de Paris*, No. 707, 1939) Dr. J. C. Lévy states that malaria is regarded as an occupational disease, for which appropriate compensation should be made, in certain countries, particularly North America (especially the States of Wisconsin and Illinois), Brazil, Spain and Italy, where its frequency as an occupational disease has given rise to special legislation. In France, on the other hand, there are no legislative measures recognizing malaria as an occupational disease, and compensation for contracting it is allowed only in the case of soldiers, sailors and airmen. Dr. Lévy, therefore, demands that malaria should be added to the list of occupational diseases in France for the following reasons: first, to repair the material damage to which a variety of workers are liable, namely, colonials and labourers in the veldt or canals, and secondly, for the adoption of additional prophylactic measures in conditions and localities where the work involves the risk of contracting malaria.

Pneumonia.

The following is reported in *Public Health Reports*.[8] The Pennsylvania Supreme Court held that pneumonia which was contracted was not an "accident" within the meaning of the *Workmen's Compensation Act*.

Recovery of compensation under the workmen's compensation act was sought for the death of an employee from pneumonia. Because of a flood the machinery in the employer's plant became covered with mud and dirt. After the waters had receded the regular employees, including

decedent, were directed to clean their machines. The decedent started on this work about a week after the flood had occurred, but the floors were still damp and muddy. After working for about eight days he became ill with pneumonia, which was attributed by the attending physician to the conditions under which the decedent had been working. The decedent's death occurred shortly thereafter as a result of the pneumonia. The Supreme Court denied compensation on the ground that there had been no "accident" within the meaning of the workmen's compensation act. In the course of the opinion the court said:

> While, in the present case, it was the flood which made necessary the cleaning of the machinery, this operation was a protracted labor, and those who engaged in it voluntarily and deliberately exposed themselves to the dampness which they knew existed. Decedent worked for eight days before he became ill, returning to the job each day in the usual fashion. Nor can the surrounding conditions during that time be fairly characterized as extraordinary. There was no sudden intense exposure to water or to cold. The most that can be said is that there was dampness in the plant and mud on the floors as lingering effects of the flood . . .

The court apparently assumed that the pneumonia was, as suggested by the defendant's physician, contracted as the result of the conditions under which the deceased person had been working. I think it is very doubtful in this case whether working in these damp conditions had anything to do with the development of the pneumonia. The association between the development of lobar pneumonia and exposure to cold is very doubtful. If lobar pneumonia is the direct result of infection, this is probably independent of the working conditions, although possibly when a person is tired out and is exposed in damp clothes in a draught resistance may be lowered. On the other hand, the view is gaining ground that lobar pneumonia may in some way represent a sensitized condition to certain organisms or their products, and, if so, relationship to chill must be purely accidental.

Sensitization.

The question of sensitization to various substances is an extremely complicated one. The reactions include asthma, various skin rashes such as dermatitis and forms of eczema, and probably a number of skin lesions. A person having acquired sensitivity may eventually manifest reactions to many different substances. Persons with a family history of asthma or other evidence of sensitization are more apt to become sensitized than other people. To what extent should employers be liable for reactions occurring in these susceptible persons from substances with which they come in contact in the course of their work? Sensitized persons should see that they choose occupations where their sensitivity does not matter. When there is a clear association in time between a particular substance used and reactions in a hitherto normal employee, it seems reasonable to grant compensation till the lesions have been cured. Other cases must be considered on their merits, which will include consideration of whether the offending substance is one causing sensitization in many persons (when compensation might be allowed), or only very rarely (when the case would be open to argument).

Conclusion.

In cases of compensation and also in the criminal courts, medical men are often asked questions as to possibilities in the causation of injuries and disease. Remote possibilities to the pathologist may, from the way the question is asked or from the manner in which the medical evidence is tendered, appear as reasonable possibilities to the judical mind and much more so to a jury. In any case which is the subject of discussion, something can be said on either side. Only those with adequate medical experience can sift the chaff from the grain in balancing the pros and cons in any case under discussion. Even they must use fully their own experience and the results of their own reading to supplement the evidence tendered on both sides. In my opinion it is essential, if right verdicts are to be given, that there should be a medical assessor to advise the judge or the magistrate as to the strength or weakness of the points raised. Not only would this be a great help in coming to a right decision, but much time would be saved by the elimination of "red herrings" from the evidence submitted.

Another aspect of disease occurring in people who happen to be employed has to be considered. We are living in days when the average span of life is being considerably increased, whilst the birth rate is diminishing. Old-age pensions and invalid pensions are going to bear more and more heavily on the still working population. The time may possibly come when the drones in the community will outnumber the workers, when every person in employment will have to support through the State an aged or invalid person as well as his wife and small family from his own resources. Everyone who can work, whole time or even part time, must be encouraged so to do. The opinion is gaining ground that it is often better for a person not to know that he has high blood pressure and for him to continue at his ordinary work, even though in the end he may die whilst performing this work. The work has probably not hastened his end, he will have been much happier and he will have been contributing his quota to the social machine. The same applies to atheroma and coronary disease, the liability to cerebral hæmorrhage and so on. If the diseased person can work, encourage him to do so; but do not hold his employment responsible for death when it comes, as come it must. Genuine invalidism must, of course, be properly provided for; but peripatetic invalidism should be left to take care of itself.

It is from deliberations before a society such as ours, embracing members of the two learned professions qualified to speak with authority on the subject, that future changes in the law dealing with workmen's compensation should originate. The free discussions before us should also be a guide to judicial decisions and should form a basis for moves to ensure that such decisions are as sound as possible. A move in this direction may be to devise machinery, if it is not already provided, for judges and magistrates to receive advice and guidance from selected, impartial, qualified medical assessors.

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(5) *The Australian Law Journal*, Volume XIV, Number 9, January 24, 1941, page 333.
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WORKMEN'S COMPENSATION FOR PERSONS DISEASED OTHERWISE THAN BY THE CONDITIONS OF THEIR EMPLOYMENT.[1]

By S. H. SKIPPER, LL.B.

THE title of this paper is not happily worded. One suspects that what the committee had in mind was "compensation for disease resulting from personal injury by accident arising out of and in the course of a workman's employment". If so, industrial diseases due to the nature of any employment and injuries uncomplicated by infective processes may be excluded from the scope of this paper. The requirements of a valid claim to compensation for this type of injury are: personal injury by accident, which must arise both out of and in the course of the employment and

[1] Read at a meeting of the Medico-Legal Society of South Australia on February 14, 1941.

result in disease causing incapacity for work. So stated the matter seems simple enough; but in actual practice it bristles with difficulties. To appreciate these one must know something of the development of the idea of "accident" as the basis of compensation for injury.

The earliest workmen's compensation act limited compensation to accidents in or about a factory or other defined premises. The legal concept of accident was restricted to something in the nature of an impact or fall. A workman had to become caught in machinery or fall from scaffolding or meet with some equally obvious mishap before he entitled himself to compensation. When the accident area was later extended beyond the confines of the employer's premises, the varieties of accidents to workmen necessarily increased. There had, however, still to be something fortuitous and unexpected in the happening to constitute it an accident within the meaning of the legislation. But in 1903 in the famous case of Fenton *versus* Thorley, the House of Lords swept aside all limitations on the popular and ordinary sense of the word "accident" and declared (per Lord Macnaghten) that it denoted "an unlooked for mishap or an untoward event which is not expected or designed". In this manner strains and physiological changes brought about by exertion became recognized injuries by accident, so long as their onset could be associated with some untoward event connected with the employment and occurring at a definite time and place. It followed that any acute or chronic morbid condition which was the end result of a slow and insidious degenerative process could not satisfy this concept of accident. The legal mind drew a distinction between, for example, lead poisoning and anthrax. In lead poisoning no time and place of infection could be fixed even approximately; but in the case of anthrax judges could visualize a germ leaping on to the unsuspecting workman from its lair in infected wool and could fix the time and place of the leap by reference to the incubation period. Thus the legal conception of accident and the requirement of approximate time and place were satisfied. The above artificial distinction between different types of diseases led to the inclusion in workmen's compensation acts of special provisions relating to industrial diseases due to the nature of a workman's employment. These are not dealt with in this paper.

I now proceed to a more detailed examination of the subject. In relation to disease, accident may have the following effects: (i) It may induce disease in a normally healthy workman, for example, heatstroke or pneumonia. (ii) It may aggravate preexisting disease, for example, strain of an arthritic joint. (iii) It may accelerate the progress of preexisting disease, for example, heart strain followed by a coronary occlusion. (iv) It may create a portal for the entry of dangerous organisms, for example, a cut finger resulting in blood poisoning.

It was early laid down that for the purposes of the *Workmen's Compensation Act* an employer must accept his workman with all his disabilities. A workman may be on the verge of complete collapse from natural decay and yet if some accident of his employment precipitates the actual catastrophe the employer is liable for compensation. It is comparatively easy to apply the judicial concept of accident to the onset of some diseases. The unlooked for mishap or untoward event in heatstroke is the impinging of heat rays from sun or furnace on the body of the workman upsetting the coordinating mechanism of his body; in blood infection it is the entry of the germ through the broken skin; in aggravated arthritis it is the trauma to the affected parts.

But the "accident" is not so apparent when the workman contracts pneumonia or has a sudden heart failure in the normal course of his everyday work. The Court of Appeal in England has evolved a formula to cover this and other cases of disease. It reads as follows:

> A physiological injury or change occurring in the course of a workman's employment by reason of the work in which he is engaged at or about that moment is an injury by accident arising out of his employment: and that is so although the injury or change be occasioned partly, or even mainly, by the progress or development of an existing disease if the work which he is doing at or about the moment of the occurrence of the physiological injury or change contributes in any material degree to its occurrence; and this is none the less true though there may be no evidence of any strain or similar cause other than that arising out of the workman's ordinary work.

Latham C.J. of the High Court of Australia criticized the inclusion of the words "or change" in the above statement, on the ground that every physiological change is not necessarily an injury, but considered that with this amendment the statement ought to be adopted and applied by the High Court. Evatt J. supplied the following gloss of the same statement:

> True, the labour of a very long period of work may have contributed to or caused the ultimate injury, but, if the work of the last day or the last hour or the last minute has contributed that is sufficient to attract liability.

The position now is this. A workman dies at his work. There is no evidence of strain, but the post-mortem examination shows that his heart was in such a condition that any exertion on the day of his death was likely to be fatal. Medical witnesses express the opinion that death was mainly due to the advanced stage of preexisting disease, but that the exertion of ordinary work must have accelerated the man's death. They agree that he might have died at any time even while resting. In this case death results from injury. There is another class of case in which the disease is of gradual onset, arises from continuous employment, and eventually incapacitates the patient. An example is gradual paralysis of the legs from the riding of a bicycle. Originally no claim for compensation arose out of such circumstances, as the "time and place" factors of accident were considered to be lacking. But in a recent case of "dropped foot" the House of Lords found no difficulty in deciding in favour of the workman. "Dropped foot" is a condition of paralysis of the muscles of the leg caused by pressure on the peroneal nerve which passes over the bone below the knee, resulting in inability to dorsiflex the foot. The workman, a miner, who had frequently to work in a crouching position with his right knee pressing on the ground, had for about a month suffered from some loss of power to dorsiflex his right foot and on the final day whilst kneeling suddenly felt his right foot go numb. The House of Lords found that pressure on the peroneal nerve during the final spell of work transformed the workman from a man who was not suffering from "dropped foot" into a man who was, and the fact that in the course of his work during the previous month he had felt some loss of the powers of dorsiflexion of the foot in no way affected the matter. The claimant, having sustained a definite physiological injury in the reasonable performance of his duties and as the result of the work in which he was at the time of the injury engaged, was entitled to compensation. Last year there was an interesting development of the law through the revision by the House of Lords of several cases relating to injuries caused by the forces of nature, such as sun stroke, frost bite and lightning stroke. These were, in the early stages of the development of the law, regarded as injuries due to natural causes common to all mankind. They did not come within the scope of workmen's compensation unless some condition of the employment increased the risk to the workman of sustaining the particular injury. The House of Lords recently considered the case of a seamen who, whilst serving in a west African port where he was especially exposed to mosquito bites, contracted yellow fever and died. Lord Atkin said:

> I myself am inclined to think that common risk of natural forces must mean the operation of the natural forces in the degree and to the extent that they would operate in the area in which the workman could be said to be exposed to them unemployed. A seaman may be directed to serve in places abroad where the forces of nature—heat, cold, flood and tempest—cause much greater risk of injury than they do at home. In such cases I personally doubt whether the fact that persons ordinarily to be found in the locality are exposed to such risks is of any importance. They are exposed to the risk as residents in the area; he is exposed to the risk because he is required by his employment so to expose himself.

It appears, therefore, that the accidental contraction of disease in the course of employment is a ground for compensation in all cases in which the risk of incurring the disease was incidental to the employment. By analogy a gardener is liable to be stung by bees, a station hand to be bitten by snakes, a hospital nurse to contract fever. That, then, is the present state of the law relating to disease resulting from accident.

Only one other matter needs mention; that is the distinction between aggravation of a preexisting disease by accident and acceleration of such disease. Aggravation means that the workman has been put by the accident into a condition which but for the accident he never would have reached. His compensation continues as long as the incapacitating effects of the aggravation persist. Acceleration means that he has been put into a condition which he would ultimately have reached in the normal progress of the disease apart from any accident, but at an earlier date. That is, the accident has merely hastened the inevitable. As the liability of the employer is limited to the incapacitating effects of the accident, if a stage in the workman's after life is ever reached when it can be said that he would inevitably have reached his then condition in the normal progress of his disease irrespective of any accident, then the liability of the employer ceases. A typical case is that of arterial sclerosis, which in any event would have caused the workman to retire from active work, say, in two years' time. In the course of a heavy lift he has a relative ischæmia possibly followed by a coronary occlusion and never works again. Theoretically the employer's liability in such a case ought to be limited to two years' compensation; but practically it is difficult to get the arbitrator to accept the opinions of the medical witnesses for the employer. This distinction between the effects of aggravation and acceleration does not apply in the case of death. Death is death, and the rights of dependants are unaffected by considerations of the wage earner's precarious hold on life by reason of long-standing disease. The only escape for the employer is by proof that death was not in any material degree contributed to by the work on which the workman was engaged at or about the time of his death, or in other words, that the workman merely "shuffled off this mortal coil".

In this respect, the method of approach suggested by Rich A.C.J. in the High Court provides an added terror (or should I say "added peril") for employers resisting claims. The learned judge did not see why a court should not begin its investigation (that is, before hearing any medical testimony) from the standpoint of the presumptive inference which the sequence of events would naturally inspire in the mind of any commonsense person uninstructed in pathology. Why should not a court say that there was strong ground for a preliminary presumption of fact in favour of the view that the work materially contributed to the cause of death?

AN INSTITUTIONAL EXPERIENCE WITH PERTUSSIS VACCINE.

By EDWARD S. STUCKEY, M.B., M.S.,
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THE purpose of this article is to describe recent experiences in the use of pertussis vaccine Phase I (Commonwealth Serum Laboratories) in immunization and early treatment of the inmates of the Infants' Home, Ashfield, during the recent epidemic of pertussis.

The Infants' Home caters for infants and young children who, for various reasons, have no home, or whose parents are temporarily unable to look after them. In some cases mothers are also admitted and help in the domestic duties of the institution. At the time of the outbreak of pertussis there were 38 children in the home, of whom only two were over four years of age and 17 were less than two years of age. In normal times the children are divided into three groups; but there is no true isolation of one group from another, since, apart from the movements of the nursing and domestic staffs, the children mix with those of other groups fairly frequently. It was to be expected, therefore, that it would be difficult to confine the disease to any particular section of the home.

It will be a help to describe briefly these different parts of the home. Infants under the age of eighteen months are kept at one end of the home, in what we may call the infants' section; those aged between eighteen months and two years are kept at the other end of the home in what is called the nursery section; those over two years old are housed in the central portion, and this may be called the school section, as these children have organized games and elementary lessons.

The outbreak began with two cases in the infants' section; the patients were immediately and effectively isolated in a small ward and looked after by separate nurses. About two weeks later three children in the school section, who had been newly admitted to the home, developed suspicious coughs, and it was decided to attempt immunization of the contacts. The vaccine was very kindly donated by the Director of the Commonwealth Serum Laboratories, to whom the members of the staff of the institution are most grateful. By the time the injections could be commenced, however, there were nine patients in the home with coughs, some of which were not by any means definite. Two of these nine were the convalescent infants already mentioned; there was one other suspected case in the infants' section; and the remaining six cases were in the school section, though only the original three were undoubted cases, and these were early. There were no cases in the nursery section.

It was decided to leave the nine children in the nursery section as controls, but not deliberately to expose them to further contact with the other children. All the children in the other sections of the home, with the exception of the two convalescent infants, were given injections whether they had coughs or not. As far as possible the children with coughs were kept apart from those without coughs.

The Dosage of Vaccine.

The vaccine used was Phase I vaccine, 10,000 million organisms to the cubic centimetre (Commonwealth Serum Laboratories). The children who received injections were divided into three groups, as follows.

Treatment Group (*T*).—Those with suspicious coughs received the dosage recommended by the makers for treatment, at intervals of three days, as follows: 0·25, 0·5, 0·75, 1·0 and 1·25 cubic centimetres, a total of 37,500 million organisms. There were seven patients in this group; four undoubtedly had pertussis, but the other three lost their coughs so soon after the injections were commenced that it seems reasonable to assume that they were not suffering from pertussis.

Contact Group (*A*).—Approximately half the contacts were given the following dosage at intervals of three days: 0·5, 0·75, 1·0, 1·5 and 1·5 cubic centimetres, a total of 52,500 million organisms. There were 12 patients in this group, three of whom developed definite pertussis within a few days of the commencement of injections, so that it may be assumed that the first injection was given in the late incubation period.

Second Contact Group (*B*).—The remaining contacts were given larger doses intramuscularly at intervals of six days, as recommended recently by various authorities. This group included only the older children, as it was not thought wise to give such large doses to the smaller infants. The dosage was as follows: 0·75, 1·5, 2·25, 2·25 and 2·5 cubic centimetres, a total of 92,500 million organisms. There were eight patients in this group, and one developed pertussis soon after the injections were commenced and was presumably in the incubation period when injections were begun. One patient from this group was removed from the institution, free from symptoms, before the injections were completed.

Details of the various cases are given in Table I.

TABLE I

Section of Home.	Subject Number.	Name.	Age.	Symptoms Present at First Injection.	Group.	Result.	Remarks.
Nursery ..	I to IX	—	18 months to 2 years.	—	—	—	Indirect contacts; no symptoms, no injections given, and no cases of pertussis.
	X, XI	—	Under 18 months.	Definite pertussis.	—	—	Convalescent; isolated for 4 weeks; no injections given.
Infants' ..	XII	D.R.	14 months.	Mild cough, 2 weeks.	T	Cough not pertussis.	—
	XIII	J.W.	15 months.	—	A	No cough.	Contact for 2 weeks prior to injections.
	XIV	W.C.	16 months.	—	A	No cough.	Contact for 2 weeks.
	XV	L.A.	18 months.	—	A	No cough.	Contact for 2 weeks.
	XVI	D.A.	18 months.	—	A	No cough.	Contact for 2 weeks.
	XVII	B.R.	2½ years.	—	B	Discharged before completion of injections.	Contact for 3 weeks prior to injections.
	XVIII	S.M.	3½ years.	—	B	No cough.	Contact for 3 weeks.
	XIX	P.McG.	2½ years.	—	B	No cough.	Contact for 3 weeks.
	XX	K.H.	3 years.	—	B	No cough.	Contact for 3 weeks.
	XXI	A.S.	2½ years.	—	B	No cough.	Contact for 3 weeks.
	XXII	J.T.	2½ years.	—	B	No cough.	Contact for 3 weeks.
	XXIII	R.McS.	4½ years.	—	B	No cough.	Contact for 3 weeks.
	XXIV	G.S.	3½ years.	—	A	No cough.	Contact for 3 weeks.
	XXV	J.McE.	3 years.	—	A	No cough.	Contact for 3 weeks.
	XXVI	R.M.	3 years.	—	A	No cough.	Contact for 3 weeks.
	XXVII	C.R.	4 years.	—	A	No cough.	Contact for 5 weeks.
	XXVIII	E.P.	2 years.	—	A	No cough.	Contact for 3 weeks.
School ..	XXIX	F.F.	2½ years.	Suspicious cough.	T	Not pertussis; subsided in 7 days.	—
	XXX	F.P.	3½ years.	Suspicious cough.	T	Not pertussis; subsided in 3 days.	—
	XXXI	D.G.	3½ years.	Cough for 2 weeks.	T	Definite pertussis; mild attack.	—
	XXXII	J.C.	3½ years.	Cough for 2 weeks.	T	Definite pertussis; mild attack.	—
	XXXIII	S.B.	3 years.	Cough for 3 weeks.	T	Definite pertussis; mild attack.	—
	XXXIV	E.P.	4½ years.	Cough for a few days.	T	Suspect; mild attack.	—
	XXXV	T.H.	2½ years.	Cough, very slight.	A	Moderate attack.	—
	XXXVI	I.A.	2½ years.	Cough, very slight.	A	Moderate attack.	—
	XXXVII	L.M.	2½ years.	—	A	Very mild attack.	Contact for 3 weeks.
	XXXVIII	B.R.	2½ years.	—	B	Very mild attack.	Contact for 3 weeks.

Results of Vaccination.

It will be seen that, with the exclusion of the two infants who had undoubted pertussis some weeks before the injections were begun, and of the nine controls, there were 27 children treated, of whom three developed pertussis prior to the injections, three more developed the disease practically simultaneously with the first injection, and two had mild attacks about a week later, but well before the injections were completed. The remaining 19 treated children, and the nine controls, escaped infection, though three had coughs thought to have been merely due to coryza, as they disappeared so quickly.

Of the ten patients in the institution who developed pertussis, it must be remembered that two had been isolated, suffering from undoubted pertussis for about a month, and were not treated with vaccine, that three of the others had undoubted pertussis at the time of the first injection, and that three more were just beginning to cough at the time the injections were commenced. These six patients must be considered as receiving vaccine for treatment rather than for prophylaxis. On these grounds one is perhaps justified in stating that prophylactic injections given to the remaining children succeeded in limiting further cases to two—an eminently satisfactory result in a group of children at this age.

The next question which arises is whether the vaccination as a form of treatment in early cases modified the disease. It is the impression of the nursing staff, and of

TABLE II.

Period under Review.	Patients with Established Pertussis.			Patients with Very Early Pertussis.			Patients with Pertussis Late in Onset.	
	D.G.	J.C.	S.B.	E.P.	T.H.	I.A.	L.M.	B.R.[1]
31/10/40 (first injection both groups) to 3/11/40	12[2] (3)[3]	12[2] (2)[3]	13[2] (4)[3]	14[2] (4)[3]	16[2] (3)[3]	15[2] (1)[3]	—	—
3/11/40 (second injection, Group A) to 6/11/40	16 (4)	9 (1)	12 (3)	11 (1)	15 (2)	14 (1)	—	2 (0)
6/11/40 (third injection Group A, second injection Group B) to 9/11/40	15 (2)	7 (0)	11 (2)	11 (1)	14 (2)	21 (2)	8 (0)	9 (0)
9/11/40 (fourth injection Group A) to 12/11/40	11 (1)	10 (0)	11 (2)	10 (1)	11 (2)	22 (2)	7 (0)	8 (1)
12/11/40 (fifth injection Group A, third injection Group B) to 15/11/40	5 (0)	3 (0)	7 (1)	9 (2)	10 (3)	20 (2)	6 (0)	7 (2)
15/11/40 to 18/11/40	4 (0)	2 (0)	4 (0)	9 (1)	7 (1)	15 (1)	4 (0)	9 (2)
18/11/40 (fourth injection Group B) to 21/11/40	1 (0)	2 (0)	3 (0)	7 (1)	6 (1)	16 (1)	5 (0)	13 (3)
21/11/40 to 24/11/40	—	1 (0)	1 (0)	2 (0)	2 (0)	8 (0)	2 (0)	7 (2)
24/11/40 (fifth injection Group B) to 27/11/40	—	—	—	—	1 (0)	6 (0)	2 (0)	5 (1)
27/11/40 to 30/11/40	—	—	—	—	—	2 (0)	1 (0)	1 (0)
Duration of disease	5 weeks	5 weeks	6 weeks	4 weeks	4 weeks	5 weeks	4 weeks	4 weeks.
Duration of troublesome coughing	2 weeks	2 weeks	2 weeks	3 weeks	3 weeks	3 weeks	1 week	2 weeks

[1] Belonged to Group B; the others all belonged to Group A.
[2] Average number of coughing spasms per day during three-day periods.
[3] Figures in parentheses refer to average number of attacks of vomiting per day during three-day periods.

myself, that it did. I append a summary of the progress of the disease in the eight cases in which injections were given. To shorten this I have taken an average of the number of coughing spasms and attacks of vomiting (shown in parentheses) observed in each case over periods of three days, and expressed the figures as the average number of coughs and attacks of vomiting per day during those periods. The dates of injections are also indicated. These were given at intervals of three days in all cases except the last (patient B.R.). This patient was in group B, in which intervals of six days were observed between injections (Table II).

It will be seen that in every case the disease was short in duration and mild in the number of vomiting attacks per day, and it is a fact that even in the cases in which coughing spasms were frequent the spasms were not so distressing as one commonly finds in infants of this age. This observation was volunteered on numerous occasions by the members of the nursing staff. No patient developed bronchitis or any other complication, all took their food well throughout the period of symptoms, and no patient had an elevation of temperature, except as a reaction to the injections.

Reactions Produced by Vaccination.

In all cases a record was kept of the temperature and of the size of the reaction twelve and twenty-four hours after each injection. The results are summarized in the following paragraphs.

After the larger doses in the group B series, a temperature of from 99·6° to 100·4° F. was frequent, and it occurred after one or more of the injections in six of the seven cases completed in this group. In the other groups raised temperatures were uncommon. Four patients out of 19 had a temperature of 98·8° to 99·4° F. after one or more injections.

The area of redness was classified as slight if less than the size of a shilling, large if up to the size of a florin, and very large if above that size. A slight to large reaction was observed after some injections in 14 of the 19 cases in which the smaller doses were given. A large to very large reaction was observed after some of the injections in five of the seven cases in which the large doses were given. Reactions were no more common in the younger infants than in the older ones. In some of the cases in which pertussis had developed the impression was gained that spasms of coughing were more frequent on the day following each injection than on other days.

Conclusions.

It is realized that the number of patients in each group is so small that no true statistical evidence of the efficacy of the vaccine can be deduced. Nevertheless, certain impressions were gained, which it may be reasonable to state.

1. Eight patients out of 38 had established or incipient pertussis at the time when injections were commenced, and only two more cases of pertussis occurred in the institution. This seems to me to be remarkably suggestive of the efficacy of the vaccine in prophylaxis, for I know the susceptibility of infants to this disease, and the crowded conditions at the home.

2. Of the eight patients who developed pertussis and received vaccine, six received their injections too late for them to be regarded as prophylactic injections; yet all these cases were very mild. The average duration of the disease was four to five weeks, and the average duration of the period during which spasms were frequent or severe was two to three weeks. This would suggest that it is worth while giving vaccine as treatment in suspicious or early cases. Complications were conspicuous by their absence.

3. Nine children were left as controls, and it is perhaps unfortunate from a scientific point of view that these were kept isolated, as none of them developed the disease and no comparison could be made between the severity of cases in which vaccine was given and in those in which it was not given.

4. It is not possible, from the small number of cases in this series, to state whether immunization with large doses is any more effective than with moderate doses. But it does seem reasonable to state that the administration of a total dosage of 50,000 million organisms appears to be an effective prophylactic dose.

5. There is no evidence that the administration of Phase I vaccine, even in doses of 25,000 million organisms at a time, is dangerous to young children, and doses up to 15,000 million organisms at a time may safely be given to infants under eighteen months of age.

Summary.

An outbreak of pertussis in an institution housing 38 young children was limited to ten cases, in eight of which the disease had developed or was developing at the time of the first injection. Phase I vaccine, in total doses of from 37,500 to 92,500 million organisms, appeared to be effective in treatment and prophylaxis of the disease.

AGRANULOCYTOSIS FOLLOWING THE USE OF "M & B 693", WITH THE REPORT OF A CASE ASSOCIATED WITH ABDOMINAL SYMPTOMS.

By GEOFFREY N. MORRIS, M.S., F.R.C.S., F.R.A.C.S.,
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IN 1931, the first evidence was presented that the disease agranulocytosis was related to the administration of amidopyrine.[1] Since then, many other drugs have been incriminated, chiefly those containing the benzene ring and being related to amidopyrine. In 1938 Kracke[2] summarized eleven reported cases of agranulocytosis following the administration of sulphanilamide.

It has been stated by Wien[3] that sulphapyridine is but one-fourth as toxic as sulphanilamide, and that it has no apparent effect on the hæmopoietic system in mice and rats. However, there is reason to believe that in man sulphapyridine is just as toxic to the bone marrow as sulphanilamide, since Rosenthal and Vogel[4] observed ten cases of granulocytopenia in two years following the use of this drug and several writers since have reported cases.[5][6][7][8]

The case reported below is of interest because the onset was that of an acute abdominal emergency and because of the very satisfactory response to treatment.

Report of a Case.

T.B., a male patient, aged twenty-one years, was admitted to the isolation compound at Puckapunyal military camp on November 28, 1940, suffering from gonorrhœa. He was given sulphapyridine ("M & B 693"), four tablets (two grammes) three times a day, for seven days. On December 6 he developed a morbilliform rash, which was regarded as due to measles, and the sulphapyridine treatment was discontinued. By December 9 the rash had faded and the patient was given "M & B 693", two tablets (one gramme) three times a day, for seven days. The sulphapyridine was discontinued on December 15 as the gonorrhœa appeared to have been cured. The patient was, however, kept in the compound so that tests for cure could be carried out. In all, 63 grammes of sulphapyridine had been given between November 28 and December 15.

On December 24 the patient was admitted to the surgical ward of the camp hospital at Puckapunyal. For two days previously he had been suffering from upper abdominal pain, which had settled in the right iliac fossa twelve hours before his admission to the surgical ward. He had eaten nothing for three days, but there had been no vomiting. His temperature was 104·8° F., his pulse rate was 110 per minute, and his respirations numbered 20 per minute.

On examination the patient looked flushed and ill; the tongue was heavily coated, but the throat was clear, though the patient complained of a slightly sore throat. Localized tenderness was present at McBurney's point, with rigidity in that area. The spleen was not enlarged.

A diagnosis of acute appendicitis was made and the abdomen was opened through a muscle-splitting incision under ether anæsthesia. The wall of the caecum was pale, thickened and œdematous; the proximal half of the appendix was thickened and inflamed; the iliac glands were enlarged and fleshy; there was no free fluid. The appendix was removed and opened. The proximal portion contained some mucopurulent material, and submucous hæmorrhages were present for about an inch of the wall. The distal half of the appendix appeared normal. The pus was examined microscopically and a number of poorly staining mononuclear cells were found; no polymorphonuclear cells were seen.

The next day the patient was very ill indeed and his temperature was 105° F. A white cell count was made at 10 a.m.; the leucocytes numbered 800 per cubic millimetre, 1% being granular cells; there were no immature neutrophile cells. At 5.30 p.m. treatment with Amour's yellow bone marrow "glanules" was started; two were given by mouth, and the dose was repeated at 11 p.m. and at 7 a.m. next day, and two were given three times a day until 24 had been given.

At 10 a.m. the next day (December 26) the white cell count was 2,510 leucocytes per cubic millimetre, with 32% of immature neutrophile cells (mainly metamyelocytes). "Pentnucleotide" therapy (Smith, Kline and French laboratories) was commenced at 2.30 p.m. with the intramuscular injection of 10 cubic centimetres. This dose was repeated twice that day. A small pustule had developed in the right supraclavicular region, and the examination of the pus from this revealed very few granular cells and large numbers of staphylococci.

Treatment with "Pentnucleotide" was continued. On December 27, 1940, 40 cubic centimetres were given intramuscularly in four doses, and at 10 a.m. on that day the number of white cells had risen to 5,520 per cubic millimetre, 8% being neutrophile cells (bilobed) and 55% immature neutrophile cells.

On December 28, 1940, 40 cubic centimetres of "Pentnucleotide" were again given, and the number of white cells was 22,000 per cubic millimetre; 14·5% were neutrophile cells (bilobed and trilobed) and 48% were immature neutrophile cells. On December 29, 1940, 10 cubic centimetres of "Pentnucleotide" were given and the number of white cells was 27,600 per cubic millimetre; 17% were neutrophile cells and 55% were immature neutrophile cells. On December 30, 1940, the number of white cells had risen to 35,800 per cubic millimetre; 23% were neutrophile cells and 43·5% were immature neutrophile cells. In Table I is shown the differential white cell count in relation to treatment. The bowels were opened on this day for the first time since the operation without the use of any purgative except paraffin.

On January 1, 1941, a small wound abscess was incised and examination of a smear preparation from the pus revealed no organisms, though *Bacillus coli communis* was grown in culture. Convalescence was uneventful until January 9, 1941, when the patient complained of pain on the right side at the base of his chest wall; the temperature during the next five days was slightly elevated, but never reached 100° F. An X-ray examination of the chest, taken on January 13, 1941, revealed no abnormality. The wound healed completely.

Discussion.

Though Whitby and Britten[9] state that infective lesions may be found anywhere along the alimentary tract in cases of agranulocytosis, and Buck[10] has described a case with an ulcer on the anus, in the great majority of instances the inflammatory changes are found in the oral pharynx.

I can find no record of any case in which pathological changes similar to those seen in the case reported here were found in the caecum and appendix, though Whitby and Britten[9] state that they have encountered a case in which the appendix was involved. Whether the localization of inflammation is related to the presence of lymphoid tissue in patches along the alimentary canal is a point which gives food for thought.

In view of the subsequent history, the rash which appeared seven days after the beginning of treatment with "M & B 693" was almost certainly evidence of a toxic reaction to the drug; but the presence of cases of rubella and morbilli in the isolation compound at the time clouded the issue. I have seen two other patients with a morbilliform rash who have been taking "M & B 693"; but in 411 cases at the isolation compound no other cases of agranulocytosis have been diagnosed.

The very high temperature on the patient's admission to the hospital was considered evidence against the diagnosis of appendicitis, but in view of the findings on clinical examination of the abdomen it was felt wise to operate; and in view of the pathological changes in the appendix, as it turned out, delay would have been unwise.

TABLE I.

Differential Blood Count and Treatment.

Date.	White Blood Cells per Cubic Millimetre.	Neutrophile Cells: Differential Count.						Total White Cells: Differential Count.					Treatment.	
		Juveniles. (Percentage.)	Stab Forms. (Percentage.)	Polynuclear II. (Percentage.)	Polynuclear III. (Percentage.)	Polynuclear IV. (Percentage.)	Polynuclear V. (Percentage.)	Total Neutrophile Cells. (Percentage).	Lymphocytes. (Percentage.)	Monocytes. (Percentage.)	Eosinophile Cells. (Percentage.)	Basophile Cells. (Percentage.)	"Glanules" of Yellow Bone Marrow Given.	Dose of Pentnucleotide.
25/12/40	800							1·0	78·0	20·0	0	1·0	4	
26/12/40	2,510	45·0	27·5	1·0				33·0	48·5	17·0	0	1·5	6	30
27/12/40	5,520	10·5	44·5	8·0				63·0	26·0	11·0	0	0	6	40
28/12/40	22,060	6·5	41·5	13·0	1·5			62·5	25·5	12·0	0	0	6	40
29/12/40	27,600	2·5	50·0	12·0	5·0			69·5	17·0	11·0	0	0	2	10
30/12/40	35,800	1·0	42·5	20·5	2·5			66·5	22·5	8·5	0	0	0	10
31/12/40	34,400	2·3	39·3	15·5	5·5			62·6	30·5	6·9	0	0	0	0
1/1/41	35,800	3·0	36·0	25·5	3·5			68·0	21·0	11·0	0	0	0	0
2/1/41	42,900	3·2	40·0	20·8	7·9	1·9	1·0	73·8	20·0	6·2	0	0	0	0
3/1/41	25,330	5·5	34·0	22·5	11·0	1·5	0·5	75·0	18·5	6·5	0	0	0	0
4/1/41	18,640	8·75	28·0	15·75	8·5	5·75	0·75	67·5	27·5	4·75	0	0·25	0	0
5/1/41[1]	14,660	4·5	24·0	15·0	16·0	4·5	1·5	65·5	32·0	2·0	0	0·5	0	0
16/1/41	11,000	0	28·0	24·5	8·0	3·0	0	63·5	25·5	5·5	5	0·5	0	0

[1] Between January 5, 1941, and January 15, 1941, the total number of white cells per cubic millimetre remained approximately constant.

Prior to the advent of nucleotide therapy the prognosis in agranulocytosis was grave. In 1932, Jackson, Porter and Taylor[11] claimed that by treatment with "Pentnucleotide" the mortality rate was reduced from the accepted figures of 75% to 26%. Much more recently in 1937 Marberg and Wiles[12] reported pronounced success with the use of yellow bone marrow extract, and Drevermann and Gardner,[12] of Melbourne, have recently published a paper on the use, in cases of granulocytopenia, of yellow bone marrow extract prepared at the Walter and Eliza Hall Institute.

Marberg and Wiles[12] state that with this form of therapy the rise in the number of granulocytes usually begins within twenty-four to thirty-six hours, as contrasted with the effect of "Pentnucleotide", which is not usually manifested in less than from four to five days. In the case under review, a response to yellow bone marrow extract was seen after sixteen hours. The extract used was Amour's yellow bone marrow extract in enteric-coated capsules.[14]

Many other forms of treatment have been recommended at times, including X-ray therapy, administration of liver extract and blood transfusion of normal or leuchæmic blood, though Jackson, Porter and Taylor[11] state that in their experience transfusions of blood have been more detrimental than beneficial.

The injection of live staphylococci has been recommended[9] to promote a leucocytosis, and though I lacked the courage or conviction to adopt this line of treatment in the present case, the patient produced for himself a small staphylococcal abscess in the supraclavicular region.

The response to treatment was seen not only in the improving clinical condition of the patient (the temperature and pulse rate had fallen to normal on the ninth day), but in a day-by-day examination of the blood picture. The almost complete absence of neutrophile cells in a total white cell count of 800 per cubic millimetre in the film taken on December 25 compares most strikingly with 66·5% of neutrophile cells in a white cell count of 35,800 per cubic millimetre five days later. Immature neutrophile cells of the stab type had appeared within sixteen hours of the commencement of treatment by yellow bone marrow extract; and neutrophile cells of a more mature type were seen on the next day.

A feature of the blood picture was the presence of neutrophile cells of a coarsely granular, degenerate type as early as the third day after the commencement of treatment, though the life of neutrophile cells is given by Sabin[15] as three to five days.

A possible explanation is that these cells had remained after the onset of agranulocytosis in the bone marrow, where the polymorphonuclear cells are produced extravascularly. With the stimulus which normally causes granulocytes to enter the circulation provided by treatment, these senile cells were probably released into the general circulation.

An alternative explanation is that these cells were myelocytes in which the changes described by Jaffé[16] were occurring. These changes are (*a*) disintegration of the specific granules of the myelocytes and (*b*) pyknosis of the nuclei and death of the cells.

At the onset of the disease the percentage of basophile cells was normal (1% to 1·5%), and it was at first thought that this provided evidence that the basophile cells were not affected in agranulocytosis; but there was, of course, a pronounced absolute reduction in the number of basophile cells.

In the case reported above a slight anæmia was present (the hæmoglobin value was 67%); but there was no reduction in the number of red cells (4,210,000 per cubic millimetre). This is in accordance with reports from other writers.[17][18]

The total dosage used in the case reported was 63 grammes of sulphapyridine—a dosage which is very similar to that reported elsewhere both for sulphanilamide and sulphapyridine, though this dosage pales into insignificance beside that reported by Amidon,[20] in which 1,000 grammes of sulphanilamide were given in 50 days, and the patient recovered after treatment with yellow bone marrow extract. However, the size of the dose seems to be, to a certain extent, unrelated to the incidence of agranulocytosis, and even a relatively small dose (4·5 grammes of sulphapyridine and 4·5 grammes of sulphanilamide) has been reported by Spain[21] as resulting in agranulocytosis.

Colebrook[18] suggests that second and third courses of sulphapyridine or sulphanilamide are particularly dangerous in relationship to the development of agranulocytosis; it is possible that sensitization occurs. There have been several articles which draw attention to the possibility that constitutional factors play a part in the pathogenesis of agranulocytosis.[22] The relationship of susceptibility and sensitivity to drugs either of the amidopyrine or sulphanilamide group is as yet undecided.

The onset of agranulocytosis some time (eight days) after the cessation of the use of sulphapyridine is also the experience of others who have reported cases.

The prognosis for patients suffering from agranulocytosis is bad. The blood picture to be seen may be of some prognostic significance. Those patients in whose blood from the onset there is a percentage of myelocytes or other early cells of the granulocyte series are probably lacking only the factor necessary for maturation, and for these the prognosis is reasonably good. In the blood of other patients, as in the case reported, at the onset there are no primitive granular cells; there is probably in these cases an aplasia of the bone marrow, and the prognosis is poor, because a response to "Pentnucleotide"—the maturation factor[23]—is less likely, since there is an absolute deficiency of the power of forming, as opposed to maturing, granular cells.

The difference between these two types of the disease is better seen, however, on examination of the material from a sternal puncture, which was not made in this case.

In view of the greatly increased use of "M & B 693" and of the fact that it can still be, and is, bought over the counter by the general public, it is important that stress be laid on the possibility of toxic effects. The milder toxic effects are well recognized; and the possibility of sulphæmoglobinæmia and methæmoglobinæmia is usually kept in mind, since blueness is always looked for. However, the much more serious complication of agranulocytosis, coming as it did in this case as a bolt from the blue, is not so frequently remembered.

Acknowledgements.

I wish to record my indebtedness to Major T. C. Backhouse, who has been personally responsible for the arduous work of the repeated blood examinations.

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Reports of Cases.

CASE OF SIMULTANEOUS INTRAUTERINE AND EXTRAUTERINE PREGNANCY.

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Clinical Record.

MRS. E.M., a *multipara*, aged thirty-six years, consulted me on December 14, 1938, asking if she were pregnant. Her last menstrual period had begun on October 12, 1938. On examination I found that the uterus was enlarged, corresponding to the period of amenorrhœa, and the cervix was soft. I diagnosed normal pregnancy. The patient felt well. She had four male children, the eldest aged fourteen years, the youngest aged three years, and all pregnancies and labours had been normal.

Two weeks later the patient came to my surgery late at night complaining of having felt very faint while sitting in a cinema, and also of pain in the midline of the lower portion of the abdomen. There was no bleeding. Frequency of micturition and scalding were noticed. Examination revealed tenderness on bimanual palpation of the uterus. I could detect no mass in either fornix, although I may have missed it at this late hour. I gave the patient a sedative and she had some sleep and felt much better when I saw her again the next morning. She was in no pain and her temperature and pulse rate were normal. The urine was normal. She had two or three attacks of pain—not severe—in the same situation during the next seven days. On the seventh day she had an attack of severe pain across both sides of the lower part of the abdomen, but worse on the right side. There was no vaginal bleeding. Great tenderness was present over McBurney's point, and a tender swelling was felt in the right fornix. I made a diagnosis of acute appendicitis complicating pregnancy.

The patient was admitted to Hornsby Hospital under the care of Dr. H. R. Scrivener, who suggested the diagnosis of ectopic gestation. At operation a right rectus incision was made and the abdomen was opened. Free blood was found in the abdominal cavity. The uterus was enlarged to the size of a two and a half months' pregnancy. The right tube was distended and blue, and blood was escaping from the external end. The tube was clamped and removed. The patient made an uninterrupted recovery from the operation and carried the pregnancy to full term. She had a normal labour on July 13, 1939, and gave birth to a healthy girl.

Comment.

Simultaneous intrauterine and extrauterine pregnancy is an obstetric rarity according to S. Mitra.(1) The total number of such cases reported in the world's literature is 306. Mitra reports two cases, in both of which he removed the uterus as well as the Fallopian tube. The most complete account of the condition is given by E. Novak, of Baltimore,(2) who reviewed the records of 276 cases, which included two of his own. He divides the cases clinically into two groups.

> In the early cases representing the great majority, the picture is commonly that of a ruptured tubal pregnancy, while the uterine gestation is not recognized until operation or at a later stage. Occasionally, however, it is the uterine gestation which is recognized in the early months, the extrauterine not precipitating severe symptoms until later.

Many cases terminate by rupture of the tubal gestation and abortion of the intrauterine fœtus. In one remarkable case reported by Araujo(3) both embryos developed to term. At operation a live but moribund child was extracted from the uterus and a healthy child was freed from the right Fallopian tube. This latter child lived and the former child died.

An interesting point is made by Novak(2) in the following statement:

> Bleeding in cases of tubal pregnancy, aside perhaps from a slight show now and then, dates from the death of the embryo. Generally speaking, the cases of tubal pregnancy in which there is no bleeding are those in which the embryo is still living. When, therefore, bleeding is absent in a case of combined pregnancy it would seem likely that at least one of the embryos is still living, exercising its protective influence upon the uterine decidua and thus preventing bleeding.

It is worthy of note that this patient never had any vaginal bleeding.

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Reviews.

SURGERY IN EMERGENCY.

IT is a pleasure to review the fourth edition of Mr. Hamilton Bailey's "Emergency Surgery".[1] It is only a little over two years since the last edition appeared, and much of the book has been recast owing to advances in the management of acute surgical conditions.

The fact that this book has now reached its fourth edition, after being first published in 1930, speaks for its popularity as a text-book for students and practitioners alike. This edition is very up to date, although there is as yet no mention of dried plasma or serum in the treatment of shock in the section on blood transfusion. The use of plasma is not mentioned in the treatment of shock of burns, though it is now known to be very efficient. However, these are only minor criticisms, which should not detract in any way from the value of this book, now fit to be ranked with the classical text-books of surgery. John Wright and Sons Limited of Bristol, have published it in their usual high standard, and the illustrations are particularly worthy of note.

[1] "Emergency Surgery", by H. Bailey, F.R.C.S.; Fourth Edition; 1940. Bristol: John Wright and Sons Limited. Medium 8vo, pp. 954, with 930 illustrations, many of which are in colour. Price: 63s. net.

The Medical Journal of Australia

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THE MEDICAL PROFESSION AND LEADERSHIP.

COMING so soon after the leading article on medical sociology, published in this journal on March 8, 1941, the address by Colonel Vickers, incoming President of the New South Wales Branch of the British Medical Association, appearing in this issue, is a heartening event. It is yet another evidence of the urgent need for the consideration of social problems by members of the medical profession; but it is also evidence that those cast for leading positions in organized medicine are not unmindful of present-day difficulties and portents. Colonel Vickers draws attention to the housing problem, to unemployment and to the problems of nutrition in a country that is blessed with an abundance of good food. He then demands that the State should realize its responsibility and relieve the medical profession of the task of supplying free treatment to an ever-increasing number of persons. After stating his views on how this should be done, he insists that the medical profession has responsibilities commensurate with the position of trust that it enjoys in the community. Obviously many chapters could be written on the wide range of subjects covered by this address, and incidentally there would probably be room for well-founded differences of opinion in regard to some of them. It is to the last of the aspects mentioned that we would refer. Colonel Vickers makes a very good point when he states that though a medical man's parents may have paid for his education, he owes something to the system and that he ought in common decency to "put something back into the pool". As a result of his special training and education, the medical man becomes fitted as few people are to deal with medical and social problems, and the "something" that is to be "put back into the pool" must have a proportionate relationship to what has been taken out of it. In other words, we return once more to the question of leadership in the community and the part that medicine should take in it.

Even in the freedom of a democracy it is clear that some must lead and others must follow. It is also true that the people have the power to choose their own leaders and that if vision is warped by deliberate misrepresentation and narrow self-interest is allowed to obscure the ultimate "greatest good for the greatest number", the right leader will not be chosen. Once he is chosen, the leader must be followed by those who have placed him in his position of responsibility. This is not so simple as it appears on paper. Certain qualities are needed in a leader and certain qualities in those who are led. As Dr. A. E. Brown has recently pointed out in these pages in his interesting article on the freedom of the medical profession, the essence of democracy is the freedom to choose and to alter the form or the personnel of government, and freely to criticize any and every fault in the administration of the State or in the management of the essential services. "Freedom of thought and freedom of expression are what make a country free and democratic." The first essential in a leader is that he shall know his job; the second is that he shall have understanding and vision, for these are not always found with knowledge. But self-discipline is necessary to a leader as well as to the led. Dr. H. Crichton-Miller has recently pointed out in a paper entitled "Discipline and Leadership", read before the Medical Society of Individual Psychology in December, 1939, and published in Number 22 of the "Individual Psychology Medical Pamphlets", that national life in many civilized countries is becoming increasingly antagonistic to personal viewpoint, personal choice and personal action. This, he holds, is tantamount to saying that as the standard of self-discipline fails, so the standard of coercive social discipline must be raised. "Obviously the greatest good to the greatest number cannot be achieved by individualistic action without self-imposed discipline." It is also clear that if those who have knowledge and the other qualities of leadership are inert or are so given to selfishness that they do not take their rightful place, they will have no ground for complaint if others not so blest with knowledge impose on them a second-rate régime. It will then be too late to realize that in everyday language they "have missed the 'bus", and that discipline imposed by others less competent than themselves is never so easily borne as self-discipline, however rigid it may be. This statement holds true not only of medical practice of the future, but also in regard to the solution of social problems. We are all members of the body politic, "and whether one member suffer, all the members suffer with it", and no one will deny that what are known as social problems are the causes of sharp sufferings to large numbers of people.

The latest author to cast medicine in a leading role in the creation of a new world order is Sir John Boyd Orr, a summary of whose address is published in *The British Medical Journal* of January 18, 1941. This author makes what is described by a leading article in the same journal as a "startling claim", for he writes: "The medical profession contains within it experts on every subject that affects human welfare. It is the only organized group of men competent to make a statement on human needs." The editorial takes Sir John Boyd Orr to task as making a statement that contains the seeds of exaggeration, though it is regarded as excusable. Since almost all readers of THE MEDICAL JOURNAL OF AUSTRALIA also receive

The British Medical Journal, they are asked to read the editorial in question. *The British Medical Journal* holds that medicine is not competent to concern itself with the economic man, the political man, the religious man or the legal man. It adds that there is danger that the doctor, acting as doctor, may be tempted to prescribe political and economic remedies for what he considers to be medical and sociological ills, and "somewhat ostentatiously to ally himself to one or other political movement". Although it admits that the modification would be incomplete, *The British Medical Journal* would rewrite Sir John Boyd Orr's statement as follows: "The medical profession has within its numbers those who, more than any other group of men and women, are competent to make a statement on the physiological and psychological needs of human society." "The cobbler", it insists, "must stick to his last." The reply is that it all depends on the cobbler. What a wretched outlook the world would have if the cobbler always did stick to his last! We may be happy that many cobblers can do more than cobble, that they have insight into other processes than their own. Many Australians, for example, remember with pride the feat of a certain umbrella-mender who studied law at odd moments and forsook his umbrellas to become eventually a statesman and one of Australia's most notable Prime Ministers. It is not suggested that men of medicine should try to scale political heights without any study or preparation; but it is quite certain that if a man who is seized with the true spirit of medicine puts his heart and mind into an effort to serve in the public life of his country, he ought to be able to take a prominent part in its public councils. It is unfortunate that a medically trained person who wishes to bring his special knowledge to his country's service in public life, will generally be debarred from doing so unless he joins a political party, for we are as a nation not yet alive to the fact that the contribution of medicine to the public weal should be kept free from all party restrictions. The only course open to such a man in these circumstances is for him to join a party, and there is no doubt that in the inevitable clash of the party machines he will, if he keeps his medical objectives before him, be recognized before long as one who has the welfare of his fellow man at heart; party politics, though not the most admirable of modern institutions, is not always and need not always be the scene of unbending and unreasonable party adherence. Organized medicine cannot, like one of its individual members, take a place in the political world, but it can make its voice heard on behalf of the sick, the poor, the halt and the maimed. Colonel Vickers would have organized medicine tell the several governments of this continent that the services of the medical profession are at their disposal. If self is forgotten and the idea of service is the sole actuating motive, we shall be able to insist and shall not be content with the offer of our services. The urgency of the matter is well stated by Sir John Boyd Orr:

> Unfortunately, in the past, . . . the profession has been too much occupied with its own remuneration and failed to recognize its responsibilities towards the bigger issues of national life. At the present time, when the artisan trade unions are surrendering rights and privileges which have been won after such arduous struggles and are throwing the whole weight of their influence into the prosecution of the war in the hope of obtaining a new and better order, the medical profession must do its utmost to ensure that the better order which will compensate for all the sacrifices of the war will in fact materialize. It should assume that it is the custodian of the health of the people and that it is its duty to define the environmental conditions necessary for the higher state of health which medical science considers can be attained . . . If the profession is willing to make its full contribution to the national effort for victory and for the equally important post-war reconstruction it should begin to do so now.
>
> The medical profession must be up and doing; it has before it a struggle against forces that would kill human progress, a struggle that will be long and will demand untiring effort. It must in no half-hearted way let the people know its objectives, that it may win adherents to the cause, "for if the trumpet give an uncertain sound who shall prepare himself to the battle?"

Current Comment.

CLIMATE AND MILITARY PREPAREDNESS.

PARTICIPATION in a war fought on foreign soil exposes the combatants to health risks of many sorts. The management of war wounds has been discussed in a multitude of articles in this and other journals. Infectious diseases not experienced in Australia, but to which our soldiers have been or are likely to be exposed abroad, have received their share of attention. Thus in the journal of March 22, 1941, A. S. Walker and L. Dods describe an epidemic of sandfly fever that occurred among Australian troops in Palestine. On March 29 J. O. Poynton enumerated a somewhat bewildering array of infections likely to occur in tropical zones, and P. A. Maplestone discussed in some detail two of the most common of these. There remains a factor of very great importance, which has as yet hardly been mentioned. We refer to climate. By this we mean the sum total of meteorologic phenomena, temperature, humidity, winds, barometric pressure, sunshine duration and so on. The way in which these influence resistance to disease and limit physical activity of the human body has been discussed recently by C. I. Singer,[1] with special application to the American Army. The subject received some attention from D. K. Lee and G. P. B. Boissard in this journal on December 21, 1940, when they showed that exercise in hot atmospheres produced effects on the pulse rates of healthy young men that varied considerably with the humidity.

Singer describes a striking experience of the last war. He was detailed as medical officer with two companies of infantry to clean up a high snow-covered mountain road in the Austrian Tyrol. One company was composed of new recruits who had come six weeks before to the camp in the valley below the mountain. The other were hardened veterans, who had been through a rigorous winter campaign in Russian Poland. After three days working in the snow, wind and rain on the mountain side 39·5% of the new recruits, but only 11·5% of the veterans, had become ill, chiefly of respiratory diseases, a strong tribute to the value of prolonged conditioning to prepare men for work in strange climates. Just as interesting are his remarks about certain failures in this war. Thus the world was amazed at the rout of the Russians in Finland. These troops, claims Singer, were healthy young men, well clothed and trained in the Russian steam baths to withstand extreme and rapid temperature changes. They had not, however, learned to withstand the prolonged exposure of a Nordic winter. Such a climate hardly affected the Finns. It was their own, and they were able to maintain peak efficiency. The failure of the French Foreign Legion, transferred from the desert, with its extreme fluctuations of temperature and low humidity, to Norway, with its

[1] *The Journal of the American Medical Association*, October 26, 1940.

predominantly low temperatures, high humidity and high wind velocity, was again largely due to the impossible climatic adaptation asked of the men.

No matter what the conditions to which the human body is subjected, while it survives it strives to keep its temperature, hydration and chemical composition within the limits that allow maximum comfort and maximum efficiency. The climatic factors named above determine the capacity of the atmosphere to absorb heat from the body. The heat produced by a person's body depends largely on physical activity. The individual feels comfortable when his heat production is in equilibrium with the heat-absorbing capacity of his environment. If the atmospheric temperature falls, comfort can be maintained by increasing the body's heat production by exercise, shivering, and so on, and decreasing heat loss by extra clothing or by peripheral vaso-constriction. If the temperature rises, decreased heat production by physical inactivity and increased heat loss by peripheral vaso-dilatation and sweating again render the individual comfortable. The zone of maximum human efficiency, while more extensive than that of maximum comfort, is limited in the same way. Fortunately these zones can be greatly extended by conditioning. An individual can be gradually hardened to withstand certain climatic conditions. Our soldiers can be trained to maintain maximum physical efficiency, bodily comfort and disease resistance in climates that vary considerably from our own. But it cannot be done in a few weeks. It must be done deliberately and with foresight. It is not for us to detail the procedures to be adopted, for we do not know the proposed disposition of our troops. They must, however, be prepared for a campaign in a certain type of climate. By the use of our widely varying Australian conditions, by contrast hydrotherapy, by controlling the temperature of sleeping barracks, by the scientific designing of uniforms and by the provision of suitable foods much can be done to prepare our men for any of the climates to which Britain has now carried her fight. To some extent this is being done. By observation of the response of men to such conditioning, and, if necessary, by tests in an artificially controlled climatic testing laboratory with modern air-conditioning equipment, it will be possible to pick men for special tasks from among those who can adapt themselves most quickly to climatic changes. With a battle front extending from Malaya to the African desert and the mountains of southern Europe and even on to Iceland, it would be worse than folly to belittle the importance of climatic conditioning of our men.

CONGENITAL URINARY TRACT DEFORMITIES AND CHRONIC PYURIA.

A MAXIM that is taught to most medical students these days is that if a child suffers from a pyuria which is chronic, recurrent or resistant to treatment, then an underlying anatomical abnormality of the urinary tract must be suspected and an attempt made to determine its nature. Most often it will be found to be a congenital deformity that promotes urinary stasis. Acquired conditions, such as calculus, tumour, stricture, prostatic hypertrophy and tuberculosis, belong much more commonly to adult life, but some of them occur in children. I. H. Erb and P. Summerfeldt[1] have recently made a survey of the congenital anomalies of the urinary tract found in 1,148 consecutive autopsies performed on children. They found 51 cases of congenital deformity of the urinary tract, an incidence of 4·4%. Approximately two-thirds of the patients had been under one year of age, and two-thirds of them were males. It was quite a common occurrence to find associated congenital abnormalities in other parts of the body. The urinary tract deformities were of many types. The most important were horseshoe kidney, ureteropelvic obstruction from stenosis or pressure of an aberrant renal vessel, reduplication or valves of the ureters, ureterovesical stenosis, urethral valves and phimosis severe enough to cause urinary obstruction. A neuro-muscular dysfunction was blamed in several cases. There was evidence of urinary obstruction in 34 cases, and the consequences of this, of course, varied tremendously, depending on the site, duration and degree of the obstruction. Inflammatory changes, as recognized by clinical pyuria or by the finding of pus in the urine at autopsy, were encountered in only 43% of the cases. Not all the patients had lesions causing obstruction, nor were obstructions always associated with pyuria. Thus, while infection of the urinary tract is a common sequel of obstruction of congenital origin, it is by no means constant. In this series there were 20 lesions causing urinary obstruction but in which there was no evidence of superadded infection. It must be remembered, however, that a majority of the children in this survey were less than one year old at the time of death, and there is no proof that pyuria would not have developed had they lived longer. Nevertheless, the existence of this group of uninfected obstructed lesions gives rise to the important conclusion that a clear urine is no proof that the urinary tract is free from abnormality.

The approach made by Erb and Summerfeldt was primarily that of the pathologist, a survey of the congenital abnormalities of the urinary tract found in a consecutive series of unselected autopsies, and an analysis to discover which of these were followed by further anatomical changes as a result of obstruction and which by infection. For the clinician, approaching the problem from the standpoint of symptomatology, the survey helps certain general rules to be made. In the first place it reminds us that congenital lesions of the urinary tract are by no means uncommon, and that many, though not all of them, tend to be followed by infection. When this does occur, experience shows that it is likely to be persistent. Any child, therefore, with an intractable urinary infection should be submitted to such investigations as pyelography and cystoscopy, for the only means of cure for some of these lesions is operative. In the second place, it clearly demonstrates that obstructive lesions of the renal tract can exist without pyuria. Some of these, such as an intermittent hydronephrosis from an aberrant renal artery, can cause severe symptoms, particularly pain. The mere finding of a normal urine, therefore, does not exclude the urinary tract as the cause of the trouble. Finally, it must be remembered that certain of these congenital abnormalities do not predispose either to obstruction or to infection, but are compatible with perfect kidney function and complete freedom from symptoms. Among such lesions are included many of the examples of horseshoe kidney and double ureter without stasis or obstruction. These are not likely to be found during life, but are discovered in the course of routine autopsies.

[1] *The Canadian Medical Association Journal*, January, 1941.

ALKALI POISONING IN GASTRIC ULCER.

IN view of the way in which many patients known to have gastric ulcer dose themselves with large quantities of alkaline powder for long periods of time, attention should be drawn to a case, recently reported, in which this procedure was followed by alarming symptoms.[1] The history, reported by J. R. M. Whigham, is that of a man, aged twenty-nine years, who had known for five years that he was suffering from gastric ulcer. He took "stomach powders" to relieve his pain, but ultimately they failed to have this effect. He therefore increased the dose and finally reached a stage when he was taking twelve teaspoon doses during the day and two during the night. Vomiting became troublesome and the patient took more alkali in the form of a mixture in the hope of gaining relief. Symptoms of mental deterioration then appeared, and only then was admission to hospital sought. Recovery eventually followed. Whigham gives details of biochemical findings which need not be reproduced.

[1] *The British Journal of Surgery*, January, 1941.

Abstracts from Medical Literature.

DERMATOLOGY.

Xanthoma Tuberosum and Myxœdema.

S. E. SWEITZER AND L. H. WINER (*Archives of Dermatology and Syphilology*, September, 1940) report a case of *xanthoma tuberosum* and myxœdema and quote Luden, who reported high cholesterol values over 200 milligrammes per hundred cubic centimetres in the blood of patients with myxœdema. The patient complained of melancholia, hoarseness and yellow discoloration of certain parts of her skin, on her hands and feet. On examination her voice was hoarse, her hair dry and coarse, and the skin of the entire body dry and scaly. Both palms were diffusely yellow and there were yellow nodules in the cutaneous creases. The nodules were within the epidermis and not fixed to the underlying tissues. There were also nodules on the knees and *tendo Achillis* on each leg. The mucous membrane of the mouth was diffusely yellow. The tongue was enlarged and thickened. The blood picture suggested secondary anæmia. The basal metabolic rate was −28%. The cholesterol content of the blood was 540 milligrammes per 100 cubic centimetres. The microscopic diagnosis of biopsies of three different areas of skin was xanthomatosis with myxœdema.

Generalized Scleroderma.

C. B. DOWLING (*The British Journal of Dermatology and Syphilis*, August-September, 1940) discusses the identity of progressive scleroderma with dermatomyositis. It has been known for many years that the skeletal muscles are involved in generalized scleroderma, even occasionally those of the palate and pharynx. Nixon drew attention to the fact that muscular atrophy was universal and not confined to muscles immediately beneath scleroderma tous skin when he reported four cases of scleroderma with widespread muscular atrophy. The author reports the histories of two patients who attended the out-patient department at Saint Thomas's Hospital, showing the characteristic cutaneous changes of progressive scleroderma, one of them obviously suffering from severe muscular weakness, the other not, although eventually the complaint of progressive fatigue was elicited from her. In the first case the diagnosis of dermatomyositis was made. W. J. Griffiths had found in dermatomyositis a disturbance of carbohydrate metabolism of a special and well-defined type. Owing to the identical cutaneous picture presented in the above two cases, the author decided to apply these biochemical tests to both. He expected the result to be positive in the first, but not perhaps in the second. However, both results were positive. Biopsies of muscles were made from the two patients. In both pathological changes were present and were identical with those that the author had seen in dermatomyositis. The process is a degenerative myopathy, not a myositis, and one in which interstitial myositis plays no part. The author has found generalized muscular weakness in every case of generalized scleroderma since he has thought of looking for it. Ingram and Stewart observed superficial sclerodermatous changes in sections from a case of dermatomyositis. Dermatomyositis begins with œdema, but it is known that œdema is also a phase of scleroderma. In chronic cases subsidence of œdema is followed by sclerodermatous changes in the skin, whether dense, as in scleroderma, or superficial, as in dermatomyositis. Raynaud's phenomenon often occurs as an early symptom in scleroderma and occasionally in dermatomyositis. Certain differences are found between the two conditions in the cutaneous symptoms. In chronic dermatomyositis, telangiectases, pigmentation, depigmentation and epidermal roughness are the variegated appearances seen in the skin. In scleroderma pigmentation has been seen quite often, but the variegated appearance is lacking, though telangiectatic tufts and striæ are sometimes present with pigmentation. The author concludes that scleroderma and dermatomyositis are one and the same disease, the clinical manifestations of which are found in the skin, the skeletal muscles and the blood vessels.

Pyoderma Chancriforme Faciei.

G. V. STRYKER (*Archives of Dermatology and Syphilology*, September, 1940) discusses the symptoms of *pyoderma chancriforme faciei* and report a case. The lesion resembled a button-like eroded or ulcerative chancre or vaccinia. Inspection revealed a round shallow ulcer with a greyish-yellow base, sloping edges and elevated, hard, bright red border and a narrow areola of erythema. There was a thin slightly purulent discharge. The lesion, which could be picked up button-like between the fingers, was freely movable over the subcutaneous tissue. There was a hard slightly tender swelling of the regional lymph glands. There was no pain, burning or itching, and the temperature was normal. The lesion, which appeared suddenly and without premonitory symptoms, was pinhead-sized at onset and enlarged in three and a half weeks to a diameter of 1·5 centimetres. The death of the patient's husband had caused frequent crying spells over several weeks prior to the appearance of the ulcer. This wetting of the skin by secretion as a possible predisposing factor was mentioned by Hoffman when he reported five cases. Dark-field examination of the serum from the lesion gave negative results. The Kahn test applied to the blood produced no reaction on repeated examination over two and a half months after the lesion first appeared. The blood picture was normal. Agglutination tests of the patient's blood gave negative results for tularæmia and brucellosis. A pure culture of *Staphylococcus aureus* was grown. Histological examination of tissue obtained from the hard edge of the ulcer revealed no evidence of tuberculosis or carcinoma. No fungi were found. Treatment was by crystal violet and antiseptic packs and by sulphamethylthiazole. The final scar was smooth and soft.

Generalized Scleroderma and Dermatomyositis.

W. FREUDENTHAL (*The British Journal of Dermatology and Syphilis*, October, 1940) states that in dermatomyositis the cutis after an œdematous stage becomes increasingly sclerotic and atrophic and the epidermis thinned and flattened. The author cannot find any essential difference between the histological changes in dermatomyositis and those described in the skin in generalized scleroderma, although there may be differences in degree, that is, atrophy of the epidermis seems to be more marked and to occur more frequently than is recorded in generalized scleroderma. Another point of difference is the presence of mucin, which the author found in small to moderate amounts in two cases of dermatomyositis. The muscular changes in dermatomyositis show a great variety and involve the muscle itself as well as the perimysium. The muscle, after an initial œdematous stage, undergoes degenerative changes varying in degree. The perimysium proliferates and tends to replace the atrophic muscle fibres. The process is accompanied by some inflammatory reaction. Lymphorrhages may be found. Germ centres occasionally occur in the lymphorrhages. Comparing these changes with that recorded in the muscle in generalized scleroderma, the author could find no essential difference.

Treatment of Pruritus Vulvæ, Leucoplakia and Kraurosis.

AGNES SAVILL (*The British Journal of Dermatology and Syphilology*, November, 1940, and December, 1940) emphasizes that for correct treatment of pruritus and eczema of the vulvæ it is necessary to discover and remove the cause, which in most of the cases is an external irritant, the most common being discharge and infected urine. The general health and power of resistance play an important role. Several forms of pruritus and dermatitis can be distinguished: (i) The first is an erythematous type. (ii) The second type is a vulvar dermatitis, which may be either an angry œdema and even weeping eczema or a lichenified condition from friction and scratching. (In elderly women psoriasis may complicate the condition.) (iii) Kraurosis shows atrophy, pallor and shrinking of the vestibule, clitoris, hood and labia, a narrowed vaginal orifice and redness of the urethral meatus. The author considers that true leucoplakia is very rare and resembles patches seen on the tongue. She holds that *leucoplakia vulvæ* has been wrongly used to describe the condition of superficial, white, sodden, hyperkeratotic epithelium extensive or in patches which is seen with (*a*) the lichenification from prolonged scratching, and (*b*) vulvar dermatitis due to local infection from various types of external irritant. The last-mentioned form is often associated with cystitis and vaginitis and may extend to the adjacent skin. The treatment may be summed up as follows: (i) Prevention of scratching, which demands self-control, bromides and hypnotics and palliative local applications; (ii) protection of the vulva from discharge; (iii) soothing with calamine lotion when there is much swelling; (iv) rest in bed if possible. X rays may be applied in one or two doses in chronic cases. For the eradication of discharge in the simple erythematous form the author uses ionization with 2% sulphate of zinc or copper, applying two milliamperes of current for two minutes to any tender inflamed ducts. For the infection of the urethra she carries out ionization first with "Novutux", then with 2% sulphate of copper or zinc, using two to four milliamperes of current for two to four minutes. One or two applications are usually adequate. In extensive vaginitis the

author uses vaginal ionization, 30 milliamperes for fifteen to twenty minutes. A wool tampon soaked in a 10% to 20% solution of ichthyol in glycerine is used to prevent discharge from leaking at night. For cervicitis ionization is also used. For the treatment of the contracted stage of leucoplakic vulvitis and of kraurosis the author advises eradication of any source of local infection. Fissures are treated with a paint of 2% nitrate of silver solution in alcohol twice a week. For conditions with contracted vaginal orifice the author uses pelvic diathermy. She states that œstrin medication has had some striking success. The importance of collaboration between the two groups of specialists, those engaged with gynæcology and those who approach the subject from the dermatological angle, is stressed.

Lichen Sclerosus et Atrophicus.

H. MONTGOMERY AND W. H. HILL (*Archives of Dermatology and Syphilology*, November, 1940) express the opinion that *lichen sclerosus et atrophicus*, which has often been designated *"lichen planus sclerosus et atrophicus"*, *"lichen planus morphœicus"* or "white spot disease", is a distinct entity and can be distinguished both clinically and pathologically from atrophic forms of *lichen planus* on the one hand and from localized forms of scleroderma, including *morphœa guttata*, on the other. The authors discuss the clinical features and quote Ormby's description. They state that "white spot disease" and "card-like scleroderma of Unna" have been used loosely to include both *lichen sclerosus* and morphœa, and suggest that these terms be abandoned. The differential diagnosis from *morphœa guttata*, *acrodermatitis chronica atrophicans*, *lichen planus*, *lupus erythematosus* and *kraurosis vulvæ* is discussed. The histological changes in *lichen sclerosus* are those of œdema and homogenization of the connective tissue and keratotic changes in the epidermis. The histological changes are similar to those seen in *kraurosis vulvæ*, from which condition *lichen sclerosus et atrophicus* can readily be distinguished. In kraurosis there is atresia or stenosis of the vaginal orifice, and the atrophic skin gradually merges with the normal skin, whereas in *lichen sclerosus* of the vulva whitish papules merge to form a sharply defined plaque extending out onto the inner aspect of the thighs and also about the anus, and there is no atresia or stenosis of the vaginal orifice.

Epidermolysis Bullosa.

A. B. CANNON, M. SANDER AND J. L. RANKIN (*Archives of Dermatology and Syphilology*, November, 1940) made a clinical and bacteriological study of four cases of *epidermolysis bullosa*. Three of the simple and one of the dystrophic type of *Streptococcus hæmolyticus* (group G, Lancefield) was isolated from the bullous lesions of three patients and from a smear of material from the throat of one of the three. The fourth patient in whom all lesions were sterile had received sulphanilamide before this study was begun. *In vitro* tests showed that the organism possessed a decided sensitivity to sulphanilamide. Consistent administration of the drug to the patient by oral and topical applications resulted in healing of bullous lesions and improvement in the patient's condition. In two other instances the lesions of patients who received less consistent treatment, became sterile. Clinical symptoms were not greatly alleviated. It is suggested, in view of these results, that infection with *Streptococcus hæmolyticus* (group G, Lancefield) may be of some significance in the causation of *Epidermolysis bullosa*.

Occupational Leucoderma.

E. HOLMES, L. SCHWARTZ AND L. H. WARREN (*Archives of Dermatology and Syphilology*, December, 1940) report a peculiar leucoderma occurring amongst twenty men employed in a tannery who were wearing gauntlet type rubber gloves. After investigation the authors discovered that an antioxidant added to the rubber for the purpose of improving its ageing properties was the cause. This antioxidant is known by the trade name of "Agerite alba" and is said to be monobenzyl ether of hydroquinone. Patch tests were made on volunteer subjects with the rubber and with the antioxidant in powder form. In a 75% ointment and in a 20% solution of alcohol, ether and collodion gave positive reactions in two cases. An investigation of all the plants in which this brand of gloves was worn revealed the same type of leucoderma amongst the workers. Biopsy specimens of depigmented and repigmented skin stained with "dopa" reagent showed "dopa" reaction not to occur in the depigmented areas and to be produced in the repigmented areas. There was no apparent injury to the cutaneous cells. Repigmentation in many persons began soon after they ceased wearing the affected gloves. The authors suggest that monobenzyl ether of hydroquinone has an action on the skin which apparently prevents the formation of melanin either by the action in the cells which form melanin or by the action on one or more intermediate products in the formation of melanin from amino-acid tyrosine. As there is no definite evidence of damage to the cells, the latter theory seems more likely to be correct.

UROLOGY.

Injuries of the Kidney.

R. H. JOCELYN SWAN (*The British Journal of Urology*, September, 1940) considers injuries of the kidney under three main categories. Subparietal injuries constitute by far the largest group. Here there is no open wound. Crushing, squeezing or twisting of the body, a direct blow, and sudden muscular violence are the commonest causes. The actual injury may be to the capsule, parenchyma, renal pelvis or the vascular pedicle, and the degree of injury in each site may vary from slight to serious. In the less serious cases, which do not call for operation but are treated by rest, it should be remembered that in any effusion where blood and urine are mixed, septic infection may occur. The possibility of injury to the ribs, neighbouring organs or even the peritoneum may have to be considered. Subparietal injuries of the kidney occur more easily when the organ is already the seat of disease, notably calculous disease or hydronephrosis. The outstanding symptoms are pain in the loin, hæmaturia and the formation of a palpable tumour in the renal area. The other categories of renal injury are incised and punctured wounds, and gunshot wounds. The author does not discuss these two groups particularly. The primary treatment of renal injury consists of rest, the application of warmth and measures to combat shock. Morphine should be used freely. The pulse rate and blood pressure should be watched carefully. When no urine is passed after the injury, a catheter should be passed with strict aseptic precautions; it may be found that the bladder is filled with blood clot. This must be evacuated by litholapaxy instruments, otherwise cystotomy will be necessary. When improvement occurs with rest, the patient should be kept in bed for a fortnight after bleeding has ceased. When the symptoms continue or get worse, or if muscular rigidity comes on, renal exploration is necessary. In diagnosis, cystoscopy may not give great help and retrograde pyelography may be dangerous or may give misleading appearances owing to the presence of blood clots. Excretion urography is safe and may help, even if only to the extent of proving that a functioning kidney is present on the opposite side. At operation, suture of the renal pelvis or even of the parenchyma may save the organ; but if lacerations are deep or extensive or if the renal pedicle is torn, nephrectomy is indicated.

Ureteric Injury from Instrumentation.

C. F. RUSCHE AND S. K. BACON (*The Journal of Urology*, December, 1940) declare that there is an increase in the incidence of ureteric perforation and express the opinion that this is due to the development of certain devices to remove calculi from the ureter. Any such manipulation should be made very gently with flexible catheters or bougies only. If the accident occurs, the injured ureter is exposed, the stone is removed, and the area where urine has become extravasated is freely drained.

Sulphathiazole in Urinary Tract Infections.

C. H. RAMMELKAMP AND L. T. STONEBURNER (*The New England Journal of Medicine*, January 9, 1941) have made a clinical and *in vitro* study of the effect of sulphamethylthiazole in urinary tract infections with *Escherichia coli*, *Proteus vulgaris* and *Staphylococcus aureus*. The infections were in all parts of the urinary tract, and 25 patients were studied. The doses were approximately one gramme every four hours, day and night. The clinical results were excellent, and the urine of these patients exhibited considerable bacteriostatic and bactericidal action *in vitro*.

Horseshoe Kidney.

F. E. B. FOLEY (*The Journal of the American Medical Association*, December 7, 1940) quotes his personal experience of seven cases of horseshoe kidney. Pain was the chief complaint, and clinically it appeared to be of renal origin. Pyelography demonstrated some obstruction, with varying degrees of pelvic dilatation in all cases; infection was present in some of them. Operation was performed for relief of pain and was successful in all except one case, in which a calculus was a complication; the calculus was removed. In all cases a lumbar incision and extraperitoneal approach were employed. Excellent exposure was secured. There was no mortality. Division of the isthmus and nephropexy to restore a

more or less correct position of the painful kidney were the operative procedures employed. In one case nephropexy had to be performed later on the opposite side.

Surgical Injury of the Ureter.

C. P. MATHE (*Urologic and Cutaneous Review*, December, 1940) states that surgical injuries of the ureter usually occur during operations on the pelvic organs. The best means for their prevention are preliminary urological studies if disease or abnormality is suspected, and, above all, the insertion of ureteric catheters before the pelvic operation. Should the accident occur, however, immediate uretero-ureteral or uretero-vesical anastomosis is imperative. Essential factors of success in ureteral anastomosis are perfect apposition, satisfactory peritonization, splinting of the ureter by an indwelling small ureteral catheter for about four days or so, and finally deviation of the urinary stream by temporary nephrostomy. Subsequent ureteral dilatation is also necessary for a good remote result. Uretero-vesical anastomosis is not practicable unless the duct is severed low down. The anastomosis should, if possible, be oblique or valvular. If repair operations are too difficult or the patient is shocked, simple ligature of the ureter is the best treatment. This may have to be followed later by nephrectomy. Bilateral occlusion demands immediate bilateral nephrostomy if the patient's life is to be saved, even though this urgent operation itself carries a mortality risk of about 30%. Later on, surgical repair of the ureters may be attempted, one side at a time.

Injuries of the Bladder.

A. R. THOMPSON (*The British Journal of Urology*, September, 1940) declares that of traumatic conditions of the lower part of the body a wound of the bladder is the most important, since it may lead to death very quickly on account of shock or the occurrence of peritonitis. Should none of these complications and no associated urethral rupture be present, the outlook is good and the patient's remote after-history will also be normal. Associated urethral damage should be treated most carefully, otherwise the patient's after-life may be quite miserable through the periurethral and other late sequelæ of stricture. Unless there be an associated fracture of the pelvis, the empty bladder is very rarely ruptured. When there is no fracture of the pelvis, distension of the bladder is necessary for the production of a rupture. Bladder rupture calls for immediate suprapubic cystotomy. Drainage must be provided and, in addition, if intraperitoneal rupture is diagnosed, the peritoneal cavity must be opened and the rent in the bladder sutured. This must be done whatever the condition of shock from which the patient may be suffering. Bladder wall tissue should be carefully preserved, and the surgeon should not be too lavish with the number of his sutures. The latter should be of a Lembert type and should not include the mucosa. In regard to bullet wounds, it must be remembered that the bullet may enter the bladder and stay there; in such cases, of course, no wound of exit is seen. Conversely, a bullet or other metal fragment may appear to be in the bladder in the skiagram, yet may be elsewhere. Therefore, two or three plain skiagrams should always be made as a routine measure. Fragments of clothing may be carried in with the bullet, and these, rather than the projectile, may lead to sepsis. A wound of the rectum may accompany the bladder wound, with resulting recto-vesical fistula. The surgeon should do all in his power to keep the two cavities apart by introducing gauze or some body tissue between the two organs.

Urinary Trichomonas Infection.

A. E. RAKOFF (*Urologic and Cutaneous Review*, November, 1940) states that vaginal trichomonas infection is a troublesome condition and is often accompanied by a concomitant urinary tract infection. Usually the urethra is involved, and less often Skene's gland, the bladder, the ureters and even the renal pelves. Occasionally the disease is transmitted to the male during coitus, and causes a non-specific urethritis, usually mild, but sometimes severe. Urethral infection by the *Trichomonas vaginalis* has not been widely recognized because of failure to search for this parasite in non-specific urethritis of both male and female. In the female the urethral infection is obscured by the more obvious, and often more severe, vaginal involvement. Frequently the patient is not aware of urinary symptoms until the vaginal infection has been overcome. The organism is best searched for in a hanging drop preparation in saline solution. After the external genitals have been cleansed with saline solution the urethral wall is gently scraped with a platinum loop to collect material. The organism is pear-shaped, is a little larger than a leucocyte, and has jerky movements. An axostyle protrudes posteriorly, and the anterior flagellæ are seen beating rapidly. Wave-like movements of the undulating membrane are also seen along the anterior margin of the parasite. The treatment of the urethra is really prevention of reinfection of the canal from the vagina. The external meatus and all surrounding tissue are cleansed with a 1 in 1,000 aqueous solution of "Metaphen", following which a drachm of the same solution is injected into the vagina with a small syringe. This technique is continued every day till the vagina remains free of organisms through three menstrual cycles, since vaginal reinfections tend to occur during menstruation.

Sanatorium Case of Renal Tuberculosis.

FROM a sanatorium devoted to extrapulmonary tuberculosis, F. H. Colby (*The Journal of Urology*, October, 1940) makes the following observations: (1) The incidence of renal and genital lesions with bone tuberculosis is higher than is generally supposed and is a more frequent complication than with pulmonary tuberculosis. (2) The presence of albuminuria in cases of bone tuberculosis is strong presumptive evidence of renal involvement. Of 19 cases of persistent albuminuria (without pus or blood), guinea-pig inoculation gave positive results in 12. Only two patients had slight urinary symptoms. (3) the relative value of culture and guinea-pig inoculation with the same specimen of urine from patients with known tuberculosis resulted in 75·7% of cultures and 98·5% of inoculations giving correct information. (4) Several months of sanatorium care are regarded as an indispensable pre-operative measure. During this period immunity is increased and such complications as wide open wounds, multiple sinuses and genital involvement may be avoided. (5) The residual ureter after nephrectomy has not caused trouble. Of two suspected kidneys, one which was removed was fibrous but free from active disease. (6) Difficult nephrectomy has been facilitated by rib resection and the use of the lobectomy tourniquet on an indurated pedicle.

Subtotal Cystectomy.

A. I. FULSOM, H. A. O'BRIEN AND G. T. CALDWELL (*The Journal of Urology*, November, 1940) record several cases in which subtotal cystectomy has been performed for intolerable pain due to Hunner ulcer of the bladder. Several times only enough tissue was left to cover a catheter, the ureteric orifices and the internal urinary meatus. In spite of this, cystograms taken after some months show a bladder of moderate capacity and resembling a normal bladder in shape. Ureteral reflux is to be observed in several cases.

MEDICINE.

The Pain of Coronary Thrombosis.

P. J. STEINCROHN (*Annals of Internal Medicine*, September, 1940) asserts that if the pain of coronary thrombosis is carefully observed, it will be found always to wax and wane rhythmically after the manner of labour pains. This periodicity of the intensity of the pain may be helpful when the diagnosis is in doubt.

Gastritis.

ANDREW B. RIVERS AND LUCIAN A. SMITH (*The American Journal of Digestive Diseases*, October, 1940) record their experience with sixty cases of gastritis simulating peptic ulcer, which were mostly of the hypertrophic or granular type as evidenced by gastroscopic examination, and which were carefully investigated to exclude all other possible organic or reflex causes of indigestion. They state that gastritis should now be accepted as a legitimate member of the family of stomach diseases, but that the task of accurately correlating the visual, clinical and pathological findings in such cases still remains. The authors are of the opinion that the patient who does not show radiological evidence of disease of the upper part of the gastro-intestinal tract, but has symptoms referable to the epigastrium or left hypochondrium which recur at fairly definite intervals following meals, often recur at night and are relieved by food or soda, even though these symptoms lack the clock-like precision of many peptic ulcers, should be considered to have gastritis, should be given treatment for gastritis, and whenever possible should be submitted to gastroscopic examination.

The Diagnosis of the Cause of Obstructive Jaundice.

T. R. WAUGH (*The American Journal of the Medical Sciences*, November, 1940) describes a method for determining the cause of obstructive jaundice by the study of the blood alone. Once it has been found that the amount of bilirubin in the plasma exceeds 0·75 milligramme per 100 cubic centimetres and that there is a prompt

direct reaction to the Van den Bergh test, provided that the patient is not pregnant or a young child or suffering from acute infection, extensive malignant metastasis in the liver, or anæmia or blood disorder in which the jaundice is distinctly of secondary importance, the Takata-Ara test is applied to the serum. If the serum reacts to this test, faint reactions being ignored, the diagnosis is considered to be cirrhosis of the liver. If there is no reaction to the Takata-Ara test, the number of neutrophile cells per cubic millimetre of the blood and the sedimentation rate are next considered, the leucocyte count being made with great care during a particular part of the forenoon. If the neutrophile cells number less than 3,000 per cubic millimetre (or if the neutrophile cells number between 3,000 and 4,500 in the presence of a normal sedimentation rate) the diagnosis is considered to be catarrhal jaundice. If still no diagnosis has been made, the number of lymphocytes per cubic millimetre of blood becomes important. If the lymphocytes number more than 2,000, the diagnosis is considered to be cholelithiasis; if they number less than 2,000, the diagnosis is considered to be cancer; the number is seldom close to the borderline. This scheme yielded the correct diagnosis for 61 out of 70 patients for whom it was tried; four patients suffering from acute cholecystitis presented the blood picture of cancer, but the clinical signs at once suggested the true diagnosis.

Glossitis and Vitamin B_2.

P. MANSON-BAHR (*The Lancet*, September 21, 1940) shows that glossitis, probably of a similar nature and not specific to the disease, is found in pellagra, sprue, pernicious anæmia, the nutritional anæmias and idiopathic steatorrhœa, and he suggests that through this and other features, such as changes in the spinal cord, these diseases are closely related to one another. On analogical and therapeutic grounds he suggests further that a deficiency of the vitamin B_2 complex may be common to all and that nicotinic acid and riboflavin play an important part in their treatment.

SURGERY.

Thyreoid Surgery in Cardiac Disease.

JOHN DE J. PEMBERTON AND JOSEPH M. MILLER (*The Western Journal of Surgery, Obstetrics and Gynecology*, August, 1940) discuss thyreoid surgery in association with heart disease which is either the consequence of or, on the other hand, quite independent of the thyreoid disease. The histopathology of the heart in thyreotoxicosis is still a conflicting subject. Some observers have reported fatty and parenchymatous degeneration, perivascular infiltration with round cells, fibrosis and granulation tissue formation. Others have failed to find any such changes which were not equally present in controls. Metabolic studies in experimental hyperthyreoidism showed an absence of glycogen from the myocardium, which was investigated both microscopically and chemically. The question of the occurrence of cardiac hypertrophy is also a matter about which there is difference of opinion. The authors consider that hypertrophy does occur if the hyperthyreoidism has been present for a considerable period. It must be remembered that patients may suffer from cardiac disease due to syphilis, hypertension or arteriosclerosis with a superadded congestive failure due to the hyperthyreoidism. In regard to pre-operative treatment, most patients are not admitted to hospital unless congestive heart failure is present. Lugol's iodine is given to the exophthalmic patients, and also to the more severely ill patients with hyperfunctioning adenomatous goitre. For auricular flutter, quinidine is used with discretion if rest and iodine fail. In auricular fibrillation without failure no special treatment is given. Patients with congestive failure are treated by limitation of fluid and salt intake, high caloric diet and diuretics, with iodine. Digitalis is used with great caution in resistant cases only and is stopped four or five days before operation. When compensation is established the patient is allowed a limited amount of exercise to avoid the debilitation of prolonged rest and the consequent susceptibility to post-operative pulmonary complications. The author found bronchopneumonia was the prime cause of death, but autopsy revealed in some cases atrophy of the liver, a factor which has not, so far, received enough attention. For anæsthesia, local infiltration *plus* nitrous oxide and oxygen when necessary during the manipulations was used. When obstructive dyspnœa was present, local anæsthesia alone was chosen. For post-operative bronchopneumonia, chemotherapy and oxygen inhalations were useful. For obstructive cyanosis, inhalations of 80% helium with 20% oxygen were particularly effective.

Malignant Tumours of Hernial Sacs.

L. M. ZIMMERMAN AND H. LAUFMAN (*Archives of Surgery*, November, 1940) briefly report three cases of malignant tumour of a hernial sac. They recall that the sacs of inguinal hernias have been known to contain almost every abdominal viscus, normal or affected with some disease process, including tumours. Primary malignant tumours of the tissues of hernial sacs themselves are, however, very rare. In each of the cases reported the patient was operated upon with a diagnosis of incarcerated inguinal hernia; the presence of a malignant tumour was not suspected. In one case clinical and *post mortem* data were complete and a final diagnosis of mesothelioma of the peritoneal hernial sac was made. In the other two the data were incomplete; but it was considered that the growths, liposarcoma and myxofibrosarcoma respectively, were probably primary peritoneal growths developing in hernial sacs.

The Physiological Sphincter of the Common Hepatic Duct.

P. L. MIRIZZI (*Archives of Surgery*, December, 1940) discusses the significance of cholangiograms taken during operation and considers that they prove the existence of a sphincter of the common hepatic duct above its point of junction with the cystic duct. This sphincter functions when the gall-bladder empties itself. In the contractile phase, with contrast medium (iodized poppy-seed oil) introduced into the gall-bladder, only the gall-bladder, cystic duct and common bile duct can be visualized. The author considers that there is a physiological neurosympathetic centre in the wall of the bile duct system or in its proximity, and that this centre coordinates the functions of the sphincter of the common hepatic duct and of the sphincter of Oddi. He believes that in the operation of choledocho-enterostomy the stoma should be placed as low down as possible, so as to avoid damaging the integrity of the sphincter of the hepatic duct.

Chronic Appendicitis.

W. C. ALVAREZ (*The Journal of the American Medical Association*, April 6, 1940) has inquired into the rationale of performing appendicectomy for "chronic appendicitis". He found that of 255 patients who were operated upon for this reason, only 25 had had pain and soreness in the right lower quadrant of the abdomen with indigestion. Many were obviously neurotic persons. Furthermore, only two of them were cured. In contrast to this, there were 130 patients who had had one or more previous attacks of what might have been appendicitis; of these, 87 were cured. He points out that a person who has never had an attack of acute appendicitis and who submits to appendicectomy has one chance in a hundred of relief from his complaints. True chronic appendicitis, he believes, is one of the rarest of abdominal diseases.

Ordinary Stomach-Ache.

A. J. C. LATCHMORE (*The Lancet*, June 29, 1940) states that a common cause of severe colicky pain in the middle of the abdomen, often cured by the patient with castor oil, is the temporary impaction of a solid mass of food in the small intestine. This induces excessive peristalsis. Vomiting may occur and there may be abdominal tenderness, and the picture of acute appendicitis may be closely simulated. The mass may consist of recognizable pieces of solid food, but is usually due to the moulding together by peristalsis of semi-solid and relatively indigestible or imperfectly masticated food. Such foods as oranges, imperfectly chewed monkey-nuts, coconut and unripe apple seem readily to produce "bolus colic" when taken on an empty stomach.

Fascial Repair of Inguinal Hernia.

T. M. JOYCE (*The Journal of the American Medical Association*, September 21, 1940) describes a method for the radical cure of inguinal hernia by a fascial suture obtained from the aponeurosis of the external oblique muscle. After the usual routine procedure of tying off the sac, a strip of fascia one-fourth of an inch wide is separated off from the superior edge of the external oblique aponeurosis. It is cut from the muscular end down to the pubic spine, and is left attached thereto. As a rule it is about five inches long. Great care must be taken to clean the fascia of all fat and areolar tissue. This strip is then threaded through the eye of a suitable Gallic needle and secured with silk. As small a needle as possible should be used to avoid separation of the fibres of the fascia. After the suturing, the end of the fascia is firmly fixed with silk. A lock stitch is used. The border of the external oblique is stitched down to Poupart's ligament under the cord. The lower flap of the external oblique is stitched over the cord to the fascia with catgut. If sufficient fascia from the external oblique is not available, strips are taken from the *fascia lata* of the thigh.

British Medical Association News.

ANNUAL MEETING.

THE annual meeting of the New South Wales Branch of the British Medical Association was held at the Robert H. Todd Assembly Hall, British Medical Association House, 135, Macquarie Street, Sydney, on March 27, 1941, PROFESSOR W. K. INGLIS, the President, in the chair.

ANNUAL REPORT OF THE COUNCIL.

On the motion of Dr. A. J. Collins, seconded by Dr. K. S. M. Brown, the annual report of the Council was received and adopted. The report is as follows.

The Council presents the following report on the work of the Branch for the year ended March 27, 1941.

Membership.

The membership of the Branch is now 1,869, as against 1,857 at the date of the last report. The additions have included 88 elections, reelections and resumptions, and 34 removals into the area of the Branch; while the losses have included 10 by resignation, 29 removals out of the area of the Branch, 54 by default in payment of subscription, and 16 by death. The losses by death were as follows: Dr. A. E. Mills, Dr. J. I. Parer, Dr. F. C. Higgins, Dr. J. G. W. Hill, Dr. E. S. Littlejohn, Dr. P. L. Broadbent, Dr. G. M. Faithfull, Dr. E. J. Jenkins, Dr. D. Fraser, Dr. G. E. Marolli, Dr. C. A. Crothers, Dr. O. P. Fox, Dr. J. M. Rainbow, Dr. A. J. Cunningham, Dr. F. Tidswell, Dr. G. G. O. Phillips.

Meetings.

Nine ordinary meetings of the Branch (including the annual general meeting), two extraordinary meetings and eight clinical meetings were held. The average attendance was 42. Eight of the ordinary meetings were held in conjunction with meetings of sections, namely: April 24, with the Section of Anæsthesia and the Section of Surgery; May 30, with the Section of Medicine and the Section of Pathology and Bacteriology; June 27, with the Section of Obstetrics and Gynæcology and the Section of Pathology and Bacteriology; July 25, with the Section of Pædiatrics; August 29, with the Section of Medicine and the Section of Neurology, Psychiatry and Neurosurgery; September 26, with the Section of Medicine; October 31, with the Section of Pædiatrics and the Section of Surgery; November 28, with the Section of Orthopædics. The clinical meetings were held at the Royal Alexandra Hospital for Children, the Royal Prince Alfred Hospital, the Royal North Shore Hospital, the Royal Hospital for Women, the Lewisham Hospital, the Sydney Hospital, Saint Vincent's Hospital and the Prince Henry Hospital. The business of the meetings included eighteen papers and addresses, numerous reports of cases, exhibits and demonstrations. Colonel Sir Alan Newton, Chairman of the Equipment Committee of the Central Medical Coordination Committee, addressed members at the extraordinary meeting on October 25 on "The Problem of Supply of Medical Equipment in Australia", and at the extraordinary meeting on November 28 By-Law 4 was amended. An invitation was extended to the fifth and sixth year medical students of the University of Sydney to attend ordinary meetings and to sixth year medical students to attend clinical meetings of the Branch.

Representatives.

The Branch was represented as follows:

1. Council of the British Medical Association (1938-1941): Professor R. J. A. Berry.
2. Federal Council of the British Medical Association in Australia: Dr. George Bell, O.B.E., Dr. W. F. Simmons.
3. Contract Practice Subcommittee of the Federal Council: Dr. H. R. R. Grieve.
4. Australasian Medical Publishing Company Limited: Dr. T. W. Lipscomb, Dr. F. P. Sandes, Dr. A. M. Davidson, O.B.E.
5. New South Wales Post-Graduate Committee in Medicine: Colonel A. M. McIntosh, Dr. L. W. Dunlop.
6. Ophthalmic Association Limited: Dr. Colin Ross.
7. Australian Aerial Medical Services: Representative, Dr. George Bell, O.B.E., Deputy Representative, Dr. J. G. Hunter.
8. Council of the Bush Nursing Association (1940-1941): Professor W. K. Inglis.
9. Board of Control of the Campaign against Tuberculosis: Dr. A. S. Walker.
10. Metropolitan Hospitals Contribution Fund of New South Wales: Dr. P. L. Hipsley.
11. Saint John Ambulance Association: Professor W. K. Inglis.
12. Executive Committee of the Council for Mental Hygiene for New South Wales: Dr. C. K. Parkinson.
13. Standards Association of Australia: (i) Institutional Supplies Committee, Dr. S. W. G. Ratcliff; (ii) Sectional Committee on Interior Illumination of Buildings, Dr. E. A. Brearley; (iii) Committee for a Safety Code in the Use of Paints, Dr. A. J. Collins, D.S.O., M.C.
14. Medical Officers' Relief Fund (Federal): Local Committee of Management for New South Wales, Dr. E. H. M. Stephen, Dr. A. M. Davidson, O.B.E., Dr. A. J. Collins, D.S.O., M.C.
15. Road Safety Council: (i) Committee for the Determination of Visual Standards for Motor Drivers, Dr. R. G. Waddy; (ii) Committee for the Determination of the Physical Capacity of Motor Drivers, Dr. J. Hoets.
16. Police Boys' Club: Professor W. K. Inglis.
17. Medical Appointments Advisory Committee (Hospitals Commission of New South Wales): Colonel W. Vickers, D.S.O.
18. Australian League of Nations Union—Refugee Emergency Council, Dr. E. P. Blashki.
19. Special Departmental Committee for the Investigation of Maternal Deaths: Dr. L. A. Dey.
20. Recreation and Leadership Movement: Professor Harvey Sutton, Dr. W. C. McClelland.
21. Council of the Royal Society for the Welfare of Mothers and Babies: Sir Robert Wade, Dr. E. H. M. Stephen.
22. Organization and Coordination of Medical Services of the Commonwealth: Dr. A. J. Collins, D.S.O., M.C., Colonel W. Vickers, D.S.O. (resigned August 13, 1940).
23. New South Wales Medical Board: Dr. J. R. Ryan.
24. The Free Library Movement: Dr. E. H. M. Stephen.
25. Workers' Educational Association: Dr. R. A. M. Allen, M.C.
26. New South Wales Institute of Hospital Almoners: Colonel W. Vickers, D.S.O.
27. Council of Education: Dr. A. J. Collins, D.S.O., M.C.
28. Department of Physical Education: (i) Physical Education Advisory Committee, Professor Harvey Sutton, O.B.E., (ii) Pre-School and Sub-Primary Committee, Dr. J. Hoets, Dr. D. G. R. Vickery.
29. Australian and New Zealand Association for the Advancement of Science: Professor Harvey Sutton, Professor Henry Priestley.
30. Commonwealth of Australia—Department of Information: Dr. J. G. Hunter.
31. New South Wales War Loans and War Savings Certificates Committee: Dr. A. J. Collins, D.S.O., M.C.
32. Overseas Children Citizens' Committee: Dr. J. G. Hunter.

Council.

(*a*) The attendance of members of the Council and of the standing committees was as set out in the accompanying table.

(*b*) The representatives of the Local Associations of Members, appointed on the invitation of the Council to attend the regular quarterly meetings of the Council, were as follows: Dr. C. G. Bayliss (Canterbury-Bankstown), Dr. A. B. K. Watkins (Central Northern), Dr. J. H. Coles (Central Southern), Dr. C. G. Champion (Central Western), Dr. L. W. Wing (Far South Coast and Tablelands), Dr. G. F. Elliott (Illawarra Suburbs), Dr. L. Cowlishaw (Kuring-gai District), Dr. G. C. Halliday (Northern District), Dr. C. H. Jaede (South Sydney), Dr. R. V. Bretherton (Warringah District), Dr. Brooke Moore (Western), Dr. R. F. Back (Western Suburbs).

Library.

Dr. G. C. Willcocks was appointed to the position of Honorary Librarian.

The following are the figures for the year:

Visitors to the library	2,883
Books lent to members	522
Journals lent to members	1,503
Books added to the library	96

Donations of books and periodicals were received from the Editor, THE MEDICAL JOURNAL OF AUSTRALIA, Dr. E. Blashki, Dr. J. M. Gill, Dr. J. C. Belisario, Dr. H. C. Rutherford Darling, Dr. M. S. S. Earlam, Dr. C. H. Shearman, Dr. W. W. Ingram, Dr. D. Anderson, Dr. H. J. Daly, Dr. J. H.

ATTENDANCE AT COUNCIL AND STANDING COMMITTEE MEETINGS.

	Council.	Committees.					
		Executive and Finance.	Organization and Science.	Medical Politics.	Hospitals.	Ethics.	Medical Sociology and Research.
DR. G. M. BARRON (Past President) ..	7	8	—	—	—	—	6
DR. GEORGE BELL (Hon. Treasurer and Premises Attorney)	7	13	1	8	1	0	0
SIR CHARLES BLACKBURN	7	—	—	—	—	1	—
DR. K. S. M. BROWN	9	—	—	12	—	—	—
DR. A. J. COLLINS (Hon. Secretary) ..	7	7	0	9	1	0	4
DR. A. M. DAVIDSON	8	8	—	—	—	—	5
DR. L. A. DEY	9	13	—	9	—	—	—
DR. B. T. EDYE	5	—	—	—	—	1	—
DR. H. R. R. GRIEVE	8	—	—	7	—	—	7
DR. P. L. HIPSLEY	7	—	—	—	3	1	—
PROFESSOR W. K. INGLIS (President) ..	8	12	1	10	3	1	5
DR. H. HUNTER JAMIESON	7	—	—	11	—	—	—
DR. A. M. MCINTOSH	6	8	0	—	—	—	—
DR. K. C. T. RAWLE	7	—	—	12	3	—	—
DR. W. F. SIMMONS	9	—	—	12	3	—	6
DR. E. H. M. STEPHEN	7	—	—	—	—	1	—
DR. A. C. THOMAS*	5	—	0	—	1	—	—
DR. E. A. TIVEY	9	—	1	9	—	1	—
DR. W. VICKERS (President-Elect) ..	8	8	1	8	2	1	2
DR. G. C. WILLCOCKS (Hon. Librarian) ..	5	11	—	—	—	—	5
Meetings held	9	13	1	12	3	1	7

* Leave of absence from October 9, 1940.

de Haas (Batavia), the Mayo Clinic Library, the Royal Society of New South Wales, the President of the Tenth International Congress of Military Medicine and Pharmacy, the Public Library, the Public Health Department, Anti-Cancer Council of Victoria, the Royal Australasian College of Surgeons, the University of Queensland (Faculty of Medicine), Association of British Chemical Manufacturers, the Section of Radiology, the Section of Obstetrics and Gynæcology, the Section of Medicine and the Section of Pathology and Bacteriology, and the Ophthalmological Society of Australia (British Medical Association).

Dr. H. C. Rutherford Darling donated two pictures and Dr. H. Hamilton Marshall one picture to the library.

Affiliated Local Associations of Members.

Border (affiliated 1908): *Chairman*, Dr. C. M. MacKnight; *Honorary Secretary*, Dr. L. S. Woods. Membership, 14. Two meetings were held.

Canterbury-Bankstown (affiliated 1930): *Chairman*, Dr. S. G. Bradfield; *Honorary Secretary*, Dr. G. Russell.

Central Northern (affiliated 1910): *Chairman*, Dr. A. B. K. Watkins; *Honorary Secretary*, Dr. O. J. Ellis. Membership, 79. Six meetings were held.

Central Southern (affiliated 1909): *Honorary Secretary*, Dr. R. G. Woods.

Central Western (affiliated 1910): *Chairman*, Dr. H. G. Rich; *Honorary Secretary*, Dr. K. S. M. Brown. Membership, 46. One meeting was held.

Eastern District (affiliated 1913): *Honorary Secretary*, Dr. N. E. McLaren.

Eastern Suburbs (affiliated 1911): *Chairman*, Dr. V. T. Goldrick; *Honorary Secretary*, Dr. C. M. Burns.

Far South Coast and Tablelands (affiliated 1935): *Chairman*, Dr. L. W. Wing; *Honorary Secretary*, Dr. K. S. Jones.

Illawarra Suburbs (affiliated 1913): *Chairman*, Dr. E. R. Figtree; *Honorary Secretary*, Dr. G. W. Ashby. Membership, 45. Five meetings were held.

Kuring-gai District (affiliated 1929): *Chairman*, Dr. T. G. Ross; *Honorary Secretary*, Dr. E. A. Cook.

North Eastern (affiliated 1913): *Honorary Secretary*, Dr. J. B. Oakeshott. Membership, 44. Three meetings were held.

Northern District (affiliated 1911): *Chairman*, Dr. R. G. Banks Smith; *Honorary Secretary*, Dr. R. J. Jackson. Membership, 71. One meeting was held.

South Eastern (affiliated 1914): *Honorary Secretary*, Dr. A. L. Caselberg.

South Sydney (affiliated 1909): *Chairman*, Dr. G. Cummins; *Honorary Secretary*, Dr. C. H. Jaede. Membership, 33.

Southern District (affiliated 1909): *Chairman*, Dr. N. F. Benjamin; *Honorary Secretary*, Dr. R. M. G. Holmes. One meeting was held.

Warringah District (affiliated 1929): *Chairman*, Dr. J. S. F. Elphinstone; *Honorary Secretary*, Dr. E. L. Newman.

Western (affiliated 1908): *Chairman*, Dr. K. C. T. Rawle; *Honorary Secretary*, Dr. S. R. Dawes. Membership, 77. Two meetings were held.

Western Suburbs (affiliated 1908): *Chairman*, Dr. H. M. Rennie; *Honorary Secretary*, Dr. C. W. Coombe. Membership, 84. Four meetings were held.

Annual Meeting of Delegates of Local Associations with the Council.

It was decided not to hold the annual meeting of delegates.

Special Groups for the Study of Special Branches of Medical Knowledge.

Anæsthesia (inaugurated 1934): *Chairman*, Dr. W. I. T. Hotten; *Honorary Secretary*, Dr. S. V. Marshall. One meeting was held in conjunction with a meeting of the Branch.

Genito-Urinary and Venereal Diseases (inaugurated 1928).

Hygiene and Preventive Medicine (inaugurated 1922).

Medical Literature and History (inaugurated 1925): *Honorary Secretary*, Dr. L. Cowlishaw.

Medicine (inaugurated 1924): *Chairman*, Dr. A. S. Walker; *Honorary Secretary*, Dr. W. E. Fisher. Membership, 22. Six meetings were held, three in conjunction with meetings of the Branch.

Neurology, Psychiatry and Neurosurgery (inaugurated 1924): *Chairman*, Dr. G. E. Phillips; *Honorary Secretary*, Dr. C. Henry. Membership, 41. Seven meetings were held, one in conjunction with a meeting of the Branch.

Obstetrics and Gynæcology (inaugurated 1925): *Chairman*, Dr. C. L. Chapman; *Honorary Secretary*, Dr. M. B. Fraser. Membership, 54. Four meetings were held, one in conjunction with a meeting of the Branch.

Orthopædics (inaugurated 1923): *Honorary Secretary*, Dr. W. L. Macdonald. One meeting was held in conjunction with a meeting of the Branch.

Oto-Rhino-Laryngology (inaugurated 1924): *Chairman*, Dr. E. P. Blashki; *Honorary Secretary*, Dr. D. G. Carruthers.

Pædiatrics (inaugurated 1921): *Chairman*, Dr. L. H. Hughes; *Honorary Secretary*, Dr. Kathleen Winning. Membership, 21. Four meetings were held, two in conjunction with meetings of the Branch.

Pathology and Bacteriology (inaugurated 1924): *Chairman*, Dr. O. Latham; *Honorary Secretary*, Dr. F. S. Hansman. Membership, 39. Five meetings were held, two in conjunction with meetings of the Branch.

Radiology (inaugurated 1926).

Surgery (inaugurated 1925).

Urology (inaugurated 1940): *Honorary Secretary*, Dr. R. G. S. Harris. Membership, 9. One meeting was held.

British Medical Association Lectures.

Lectures were arranged as follows:

Northern District Medical Association: Tamworth, December 15, 1940—Dr. L. H. Hughes, "Some Recent Advances in Medicine".

North Eastern Medical Association: Lismore, April 6, 1940—Dr. J. C. Belisario, "The Diagnosis and Treatment of Some Common Skin Diseases".

Federal Council.

The Federal Council of the British Medical Association met in Sydney on September 3 and 4, 1940, and in Melbourne on March 3 and 4, 1941.

Dr. George Bell and Dr. W. F. Simmons attended as representatives of the Branch. The reports of these meetings were published in THE MEDICAL JOURNAL OF AUSTRALIA.

The Council entertained the members of the Federal Council and the Directors of the Australasian Medical Publishing Company at dinner during the September meeting.

Department of Medical Sociology and Research.

The objective of the department in the past year has been to develop amongst the public a wider appreciation of the principles of scientific medicine. It was felt that the only desirable method was to undertake a work of popular education, through discussion of health and medical subjects in a manner both interesting and informative.

Possible media for such discussion include broadcasting and the Press. Accordingly, early in the year the scripts of several talks, to be given by a "Spokesman" of the Association, were submitted to the Australian Broadcasting Commission. The scripts were accepted, and the Commission, having ascertained that they had been favourably received by the public, continued the talks as a regular weekly feature, "Highways to Health", till the end of the year. They were programmed as "national talks" and broadcast over the national network. In all, twenty-three talks of fifteen minutes each were given between July and December. Many comments, received by the Commission and by the Association from all over Australia and even from New Zealand, indicated a wide public interest.

This impression is supported by the fact that the organizers of "Health Week" invited the Spokesman to choose a subject related to their work for his talk during that week ("Progress in Preventive Medicine"). They also invited contributions to the "Health Week" booklet, and seven articles (acknowledge to the Department) were supplied. Two lunch-hour talks were given, at the request of the organizers, in "Apple Week". Later in the year the authorities of the Royal Alexandra Hospital for Children suggested that the Spokesman should utilize one of his talks to impress upon the public the danger of whooping cough to young children. The subject chosen was: "Whooping Cough: A Killer Disease". Other subjects adopted at the suggestion of outside organizations were "Prenatal Care of Mothers" and "Parental Education".

That the Spokesman may influence public thought is indicated by the following instances. After a talk on "Tuberculosis in the 'Teens, and the Breadwinner's Problem" it was noticed that there was a marked increase in the number of young people submitting themselves for radiological examination at the Tuberculosis Division of the Health Department. A talk was given on foot ailments and their relation to footwear; after which the editor of the "Australasian Leather Trades Review" asked for permission to publish the script in that journal. Extracts and illustrations were published (October 16), with editorial comment on the possibility of manufacturers cooperating in improving, from the point of view of health, standards for footwear.

Assistance was given to various newspapers in obtaining explanatory comment on items of medical news, such as cabled reports of progress in medical research.

As well as through the national stations, the talks have been broadcast on short wave. At the suggestion of the Broadcasting Commission, a talk ("A Doctor Speaks from Australia") was given, on January 29, on short wave to the United States.

The department's work has been assisted not only by frequent mention in the Broadcasting Commission's announcements, but by the publication of extracts from talks in the *A.B.C. Weekly*. As the *A.B.C. Weekly* has a large circulation and a nationwide distribution, its references to the talks are of great assistance to the Association's educational work.

The Broadcasting Commission recently announced that as "Highways to Health" had "proved so popular last year", the feature would be continued. A number of talks has been prepared, and the first, on "'Acidity' and Digestion", was given over the national network on March 5. The Commission announced that evening that the script would be published in full in the *A.B.C. Weekly* on March 19.

The scripts have been prepared in a style easily adaptable to publication. A selection of twelve of the first series was submitted to Messrs. Angus and Robertson, Limited, who published them in January, without expense to the Association, as an attractively printed booklet ("Highways to Health: Talks by the B.M.A. Spokesman"; 1s.). Copies for Press and radio review have been distributed.

Results of the first year's work of the Department of Medical Sociology and Research may be regarded as indicating that the public will look increasingly to the Spokesman of the Association for the expression of authoritative views, and for guidance, in a general way, in health and medical subjects.

War Emergency.

(*a*) *Members Engaged in Military Duties.*—Since the commencement of the War many members have been accepted for military service and have either proceeded overseas with the armed forces of the Empire or have devoted much time to military duties locally.

(*b*) *Protection of Practices.*—The Council is pleased to record that it has approved of eight schemes for the protection of practices submitted by local associations and groups of members.

(*c*) *Commencement of Practice.*—It was decided to incorporate in the monthly memorandum to members for the duration of the War a standing notice emphasizing the undesirability of a member commencing practice without first consulting the Council of the Association.

(*d*) *Coordination of Medical Services.*—With the object of securing greater coordination of the civilian and military requirements a delegation from the Council addressed the State Committee for the Coordination of Medical Services on various aspects of medical and hospital services and submitted a plan for the organization of medical personnel in Australia in the war emergency.

Later, this plan, with some slight amendments, was submitted to the Federal Council for its consideration. The plan provided for the constitution of:

1. A Federal medical war committee whose functions would be to supervise and coordinate the work of the State medical war committees; and

2. State medical war committees whose functions would be:
   - (i) To advise on all questions relating to the supply of medical personnel for the medical branches of the defence forces and for civil defence purposes.
   - (ii) To establish and supervise local medical war committees and coordinate the work of these committees.
   - (iii) To organize and recommend duties for those practitioners who are not available as personnel for the defence forces:
     - *a.* for civilian work in all its branches, such as general and specialist practice, continuance of public hospital practice and public health services;
     - *b.* for air raid precautions service or other civil defence measures.

The basis of the work of the committee would be the Register of Medical Man-Power established by the Federal Council.

(*e*) *Medical Man-Power.*—At the request of the Federal Council a register was undertaken of the medical manpower of the State. The Council desires to express its appreciation to the many members for their willing cooperation.

(*f*) *National Emergency Services.*—The Council has continued to cooperate with National Emergency Services in regard to the examination of members of the general public who have been trained in first aid and also in the provision of medical commandants for aid posts and parties.

The Medical Secretary is the Honorary Secretary of the Medical Services Committee of National Emergency Services.

A letter was received from the Minister in charge of national emergency services expressing appreciation of the cooperation and assistance given by members of the Association.

Offer of Sanctuary to Families of Colleagues in Great Britain.

The hearty cooperation of the Branch was extended to the Federal Council in its scheme for providing sanctuary to the families of members of the profession in Great Britain. For various reasons only a few of our British colleagues have availed themselves of the offer.

The Council desires to express its thanks to those members of the Association who so willingly offered to assist.

Petrol Rationing.

At the request of the New South Wales Liquid Fuel Control Board, the Council decided to cooperate with the board in the control of the issue to medical practitioners of ration tickets for petrol requirements.

Hospitals.

Broken Hill and District Hospital.

The Council advised the Hospitals Commission and the Board of the Broken Hill and District Hospital that, on the ground of public interest, it strongly opposed the proposal to appoint as the staff of the new hospital at Broken Hill full-time salaried medical officers only and to permit such officers to treat patients admitted to private and intermediate beds.

Later, the board, following representations by the Council, decided that the hospital, in addition to a resident staff, should have a staff of visiting medical officers selected from the practitioners in the town, but with the proviso that the resident staff should be permitted to treat intermediate and private patients—a proviso which the Council could not approve.

Subsequently the Medical Secretary visited Broken Hill for the purpose of placing the views of the Association before the board.

Negotiations are still proceeding.

Treatment in Public Hospitals of Police Injured on Duty.

The Council advised the Hospitals Commission that strong exception was taken to a circular issued to all public hospitals stating that the board of each hospital should make arrangements with the members of the honorary medical staff to render free treatment to police injured or otherwise incapacitated whilst on duty whatever their financial status might be, and that it could see no reason why a police officer should not be classified in the same way as any other person.

The Council is still in communication with the Hospitals Commission in the matter.

Contract Practice.

Friendly Society.

At the request of the Friendly Societies Association a conference was held on September 17, 1940, between representatives of the various grand lodges and the Council, as represented by the Medical Politics Committee, to discuss the proposed Federal common form of agreement. The object of this agreement, which had in the first place been drawn up at a meeting of the Contract Practice Committee of the Federal Council with the Consultative Committee of the Friendly Societies of Australia at Melbourne, June 14, 1940, and later approved with slight amendments by the Branches, is to secure, as far as possible, uniformity in contract practice throughout Australia.

A number of amendments were proposed by the representatives of the Friendly Societies Association, but the chief objection to the new agreement was that it provides that the agreement shall be made between the medical officer and the grand lodge, and not as at present between the medical officer and the local branch of the grand lodge.

The whole matter is still under consideration.

Other Contract Practice.

The Federal Council was requested to take up with the Commonwealth Government the question of the provision, on a contract basis, of a medical service to the dependants of members of the Australian Imperial Force who were not in the position to pay private fees when requiring the services of a medical practitioner.

By-Law Amendments.

At an extraordinary general meeting held on November 28, 1940, By-Law 4—"Annual Subscription"— was amended by the addition of a new clause, as follows:

> (*f*) In the case of a member serving overseas with the armed forces of the Commonwealth the annual subscription shall be three pounds three shillings.

British Medical Agency of New South Wales Limited.

The annual general meeting of members of the British Medical Agency of New South Wales Limited was held on October 1, 1940.

In presenting the report of the directors on the business of the agency for the year ended June 30, 1940, the chairman, Sir Robert Wade, pointed out that it was inevitable that the agency should suffer some loss of revenue in the year under review, as compared with the trading results of the two previous years. However, the final result was a net profit of £728, after providing an adequate reserve for all taxation purposes.

A dissection of the profit and loss account disclosed a reduction in the amount of commission from the sales of practices, but little variation in the amounts earned in other ways. A reserve of £400 for taxation was noted, as was also an amount of fixed deposits totalling £4,000.

The chairman explained that the agency was experiencing some difficulty in securing enough practitioners for locum work, and it was feared that this condition of affairs would continue for some time to come. The advent of the war had affected business to a very marked extent, and he was sure that members of the profession would understand the position and appreciate the difficulty in securing enough suitable men both for locum work and for the purchase of practices.

Under the articles of association it was necessary to elect directors for the ensuing year. The retiring directors, Sir Robert Wade, Dr. F. Crown Craig, Dr. A. M. Davidson, Dr. George Bell and Dr. A. M. McIntosh, were eligible for reelection and, as there were no other nominations, they were duly elected.

Medical Finance Limited.

The annual general meeting of shareholders of Medical Finance Limited was held on October 1, 1940, at 8.30 p.m.

The chairman, Sir Robert Wade, in presenting the report of the directors on the business of the company for the year ended June 30, 1940, stressed the difficulties which had arisen as a result of the European war, and expressed satisfaction at the result in spite of those difficulties.

Loans were granted to fifteen new applicants during the year, and the total number of loan accounts as at June 30 was forty-six, the liability of borrowers being £64,743 principal and £686 accrued interest. The gross income earned was insufficient to cover our working expenses and to absorb a loss made in connexion with one of the earlier loans; but the final result of £247 loss was recorded as satisfactory in view of all the circumstances.

Shareholders were asked to note particularly that it had not been necessary to make any call on the liability of £10 per share, and Sir Robert Wade also stated that it was not the intention of the directors to make any such calls at this juncture. In conclusion he stated that the majority of loans now outstanding should be repaid within their schedule periods, and that the directors were exercising every care in granting new applications, so that only those propositions of sound financial worth would be considered in future.

It was necessary to elect directors to fill the vacancies created by the retiring directors, Dr. George Bell and Dr. A. M. McIntosh, who were eligible for reelection. These gentlemen were duly elected as directors for the ensuing year.

Social.

It was decided to postpone for the duration of the War the annual competition for the H. Rutherford Darling Golf Cup.

Congratulations.

Congratulations were extended to Sir Champion de Crespigny, Dr. Arthur A. Palmer, O.B.E., Colonel R. W. Whiston Walsh, D.S.O., and Surgeon-Captain Leonard Darby, C.B.E., on the distinguished honour conferred on them by His Majesty the King.

British Medical Association House Revenue Account.

The premises revenue account discloses a net surplus of £3,176 15s. 4d., as against a net surplus of £3,525 4s. 10d. for the year ended December 31, 1939, being a decrease of £348 9s. 6d. This decrease of £348 9s. 6d. in the net amount of revenue earned is mainly due to the provision of £1,050 for Federal income tax and a reduction of £656 16s. 5d. in rent revenue, less sundry decreases in several items of expenditure as set out in the accompanying schedule.

A comparison of the annual percentages of expenditure to rent revenue from the time of opening the building in 1930 up to December 31, 1940, is as follows:

	Percentage of Expenses to Revenue.	Percentage of Result to Revenue.
½ year to December 31, 1930	119·4	Deficiency 19·4
1 year to December 31, 1931	114·8	Deficiency 14·8
1 year to December 31, 1932	109·8	Deficiency 9·8
1 year to December 31, 1933	97·9	Surplus 2·1
1 year to December 31, 1934	77·7	Surplus 22·3
1 year to December 31, 1935 (including depreciation)	102·1	Deficiency 2·1
1 year to December 31, 1936 (including depreciation)	89·0	Surplus 11·0
1 year to December 31, 1937 (including depreciation)	82·7	Surplus 17·3
1 year to December 31, 1938 (including depreciation)	78·6	Surplus 21·4
1 year to December 31, 1939 (including depreciation and provision for doubtful debts)	80·6	Surplus 19·4
1 year to December 31, 1940 (including depreciation)	81·9	Surplus 18·1

The percentages of rent revenue, expenses and depreciation and the percentage of net surplus for the year to the capital value of the land and building (British Medical Association House) as shown by the books at December 31, 1940, namely, £169,648 11s. 3d., with the previous year's percentages in parentheses, are as follows:

			1939.
Rent Revenue (including amount charged for British Medical Association Branch offices, *et cetera*)		10·29%	(10·50%)
Sundry Expenses, Interest and Provision for Painting Building	6·77%		(6·58%)
Reserve for Doubtful Debts	—		(0·26%)
Depreciation of Building	1·65%		
		8·42%	(1·62%)
Net Surplus for Year		1·87%	(2·04%)

Financial Statement.

The Council has pleasure in presenting to members the balance sheet and accounts in respect of the financial year which terminated on December 31, 1940.

The net surplus of revenue over expenditure for the year amounted to £4,325 9s. 4d. after making provision for all known expenses.

The sum of £2,976 5s. has been written off for depreciation of the building (British Medical Association House), plant, office furniture and equipment, and the library.

NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

Balance Sheet as at December 31, 1940.

Fixed Liabilities.	£ s. d.	£ s. d.
Debentures—		
92 4% Series "A" at £10 each	920 0 0	
414 4·65% Series "B" at £50 each	20,700 0 0	
244 4·65% Series "C" at £10 each	2,440 0 0	
	24,060 0 0	
Less Amount Unpaid	62 0 0	
	23,998 0 0	
Australian Mutual Provident Society (secured by Mortgage over Property, British Medical Association House)	77,000 0 0	
		100,998 0 0
Current Liabilities.		
Sundry Creditors	324 0 3	
Interest Accrued on Mortgage	288 15 0	
Deposit at Call	700 0 0	
		1,312 15 3
Other Credit Balances.		
Subscriptions Paid in Advance		133 13 3
Provision for Taxation		1,050 0 0
Provision for Painting of Building		1,000 0 0
Accumulated Funds—		
Balance at December 31, 1939	72,328 10 8	
Less Federal Income Tax paid	602 2 0	
	71,726 8 8	
Add Surplus for Year ended December 31, 1940—		
Branch A/c. £1,148 14 0		
Premises A/c. 3,176 15 4		
	4,325 9 4	
		76,051 18 0
		£180,546 6 6

Fixed Assets.	£ s. d.	£ s. d.
Land and Building, British Medical Association House—Cost less Depreciation on Building	169,648 11 3	
Library—at Valuation less Depreciation	1,259 4 2	
Office Furniture and Equipment—at Valuation less Depreciation	553 9 4	
Debentures in other Companies—		
Australasian Medical Publishing Company, Limited (face value)	100 0 0	
Commonwealth Treasury Bonds (face value)	1,100 0 0	
		172,661 4 9
Floating Assets.		
Sundry Debtors (after making provision for doubtful debts)—Sundry Tenants, Rent *et cetera*		2,023 7 2
Cash on Hand		2 9 11
Commercial Banking Company of Sydney Limited—		
Premises and Branch Current Accounts	1,695 17 11	
Fixed Deposits	3,500 0 0	
		5,195 17 11
Other Debit Balances.		
Prepaid Insurance, Rates *et cetera*		663 6 9
		£180,546 6 6

W. KEITH INGLIS, President.
GEORGE BELL, Honorary Treasurer.
ROBERT J. STIFFE, Financial Secretary.

Sydney, January 21, 1941.

We have examined the foregoing Balance Sheet with the Books of Account of the New South Wales Branch of the British Medical Association and, having obtained all the information and explanations we have required, we are of the opinion that such Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the Company's affairs according to the best of our information and the explanations given to us and as shown by the Books of the Company. In our opinion the Register of Members and other records which the Company is required to keep by the New South Wales Companies' Act 1936 or by its Articles have been properly kept.

London Bank Chambers,
18-20, Martin Place,
Sydney.

(Sgd.) F. W. DUESBURY, HARTIGAN & Co.,
Chartered Accountants (Aust.).

BRANCH ACCOUNT.

Income and Expenditure Account for the Year ended December 31, 1940.

	£ s. d.	£ s. d.		£ s. d.	£ s. d.
December 31, 1940—			December 31, 1940—		
To Salaries	2,652 6 4		By Subscriptions Received—		
„ Rent—Offices, etc.	1,000 0 0		1940	10,011 19 9	
„ Printing and Stationery	308 13 6		1939	259 8 9	
„ Stamps and Telegrams	260 12 3		Previous Years	50 10 3	
„ Telephones	132 0 5				10,321 18 9
„ Legal Expenses	29 8 0		*Less* Proportion due to—		
„ Travelling Expenses	52 12 9		British Medical Association	2,326 17 5	
„ Insurance	5 12 8		THE MEDICAL JOURNAL OF AUSTRALIA	1,757 5 0	
„ Exchange and Bank Charges	10 0 3				4,084 2 5
„ Refreshments—Meetings	17 12 6				6,237 16 4
„ Newspapers	6 3 9		„ Interest	4 0 0	
„ Sundry Petty Expenses	83 1 1		„ Rent, Assembly Hall	59 18 0	
„ Gratuity	60 0 0		„ Sales, C.F.A., etc.	10 3 6	
„ Tea Money	27 13 6		„ Broadcasting Fees	120 15 0	
„ Federal Council	463 10 0				194 16 6
		5,109 7 0			
„ Allowance for Depreciation of—					
Library	119 1 5				
Office Furniture and Equipment	55 10 5				
		174 11 10			
„ Balance, being Surplus for the Year ended December 31, 1940, transferred to Accumulated Funds Account		1,148 14 0			
		£6,432 12 10			£6,432 12 10

A sum of £200 has been provided out of the current year's revenue to create a reserve for painting the exterior of the building. This amount for the time being is used in the business of the Association.

Dr. George Bell moved that the statement of receipts and expenditure be received. The motion was seconded by Dr. B. T. Edye and carried. Dr. Bell also dealt with the balance sheet and the premises account. Dr. Edye seconded Dr. Bell's motion that the statements be received, and the motion was carried.

ELECTION OF OFFICE BEARERS.

Professor Inglis announced that the following had been elected members of the Council for the ensuing year: Dr. George Barron, Dr. George Bell Sir Charles Blackburn, Dr. K. S. M. Brown, Dr. A. J. Collins, Dr. A. M. Davidson, Dr. L. A. Dey, Dr. B. T. Edye, Dr. T. M. Greenaway, Dr. H. R. R. Grieve, Dr. P. L. Hipsley, Dr. H. H. Jamieson, Dr. A. M. McIntosh, Dr. K. C. T. Rawle, Dr. W. F. Simmons, Dr. A. C. Thomas, Dr. E. A. Tivey, Dr. G. C. Willcocks.

Messrs F. W. Duesbury, Hartigan and Company were appointed auditors for the ensuing year.

INCOMING PRESIDENT'S ADDRESS.

Colonel W. Vickers delivered his President's address (see page 503). In moving a vote of thanks to Colonel Vickers for his address, Colonel A. M. McIntosh said that the address was a call to service. It was most satisfactory that the Branch would have as its President one who had an intimate knowledge of the workings of the Army Medical Corps as well as of Branch procedure. Dr. H. H. Jamieson seconded the vote of thanks. Before asking the members to carry the vote of thanks, Professor W. K. Inglis said that Colonel Vickers had given members subject matter for much thought. He had shown that the interests of the profession were wrapped up in the interests of the community. Colonel Vickers's words were a call to unselfishness. The vote of thanks was carried by acclamation.

INDUCTION OF PRESIDENT.

Professor W. K. Inglis inducted the President for the year 1941-1942 (Colonel W. Vickers) and wished him a successful year of office. Colonel Vickers thanked the members for his election.

VICTORIAN BRANCH NEWS.

The following statement is published at the request of the Victorian Branch of the British Medical Association for the information of members.

The Obligations of Medical Practitioners Regarding the Furnishing of Evidence and Medical Witnesses' Fees.

A medical practitioner is under no obligation to furnish a statement (prior to giving evidence in court) to the police, a solicitor, or any other person regarding any medical or surgical contemplation of criminal or civil proceedings and even though he may have been served with a subpœna.

Attention is called to Section 28 of the *Evidence Act* 1928, as follows:

> No physician or surgeon shall without the consent of his patient divulge *in any civil suit action or proceeding* (unless the sanity of the patient is the matter in dispute) any information which he has acquired in attending the patient and which was necessary to enable him to prescribe or act for the patient.

The word "information" in this section has been held to include not only communications made by the patient, but also knowledge acquired by the physician or surgeon by his professional observation and examination.

A medical practitioner who is approached by a solicitor for a statement with regard to a case is entitled to name his fee for furnishing a statement, attending conference with counsel and attending at court; but unless the solicitor gives his written undertaking agreeing personally to pay the fee, he will not be personally liable, but the plaintiff or defendant, as the case may be, would be liable for an amount agreed upon. A written agreement should, however, as evidence of the arrangement come to, always be obtained from the solicitor or his client and the fee thus agreed on, even though it be in excess of the court scale of witnesses' fees, could then be recovered.

Any doctor in doubt as to the possibility of his fees being paid should follow the suggestions outlined above and thereby avoid the inconvenience and loss of time to which members of the profession are occasionally subjected.

In Civil Cases.

A medical practitioner must attend court if served with a subpœna and if he has been paid sufficient conduct money to take him to and from the court.

Before being sworn (even if in the witness-box) he can require payment of his fee for attending court before giving evidence, but can only then demand the fee fixed by the court scale. If his fee is not forthcoming or guaranteed, he can decline to be sworn.

In any case, however, where payment of the fee might be in doubt it would be advisable to obtain payment before entering the witness-box.

If a witness goes into the witness-box and, without asking for his fee to be paid or guaranteed and is sworn, he must give evidence.

Apart from agreement, witness fees are payable as follows:

(*a*) Civil cases in the Supreme Court: a fee of one guinea up to three guineas for each day of attendance, and where a witness resides at a distance from the place of trial an amount in addition for reasonable travelling expenses and sustenance.

Fees and allowances are determined by the taxing master (subject to an appeal to a judge), who can in special cases increase the above amounts. The taxing master can also allow a qualifying fee to a witness, for example, for making experiments or conducting investigations prior to giving evidence.

(*b*) Civil cases in the County Court: a fee of one guinea for each day of attendance, and where a witness resides or has his place of business more than four miles from the place of hearing the sum reasonably paid for travelling expenses and where a witness is compelled to be absent from home overnight, a reasonable sum not exceeding fifteen shillings for each night as sustenance fee.

Fees and attendances are determined by the registrar, and a qualifying fee can be allowed by a judge.

(*c*) Civil cases in the Court of Petty Sessions: a fee of one pound for each day of attendance and for each day necessarily absent from home, in travelling to and from the court, in addition to fares by train, tram or bus; but if none of these conveyances are available and a witness resides beyond three miles from the court, the sum actually paid as travelling expenses but not exceeding one shilling a mile for every mile he may reside from the court.

In Criminal Cases.

A medical practitioner is bound to attend court if served with a subpœna and cannot require payment of a fee before giving evidence

Witnesses for the Crown. In the Supreme Court, Court of General Sessions or Court of Petty Sessions or before justices a medical witness who attends on behalf of the Crown is entitled to one guinea for each day's attendance and one guinea for each day travelling to and from court in addition to fares by train, tram or bus; but if none of these means of conveyance are available, an allowance of the sum actually paid but not exceeding sixpence per mile each way he may have to travel to and from the court. Such witness may be allowed the expense incurred in employing a *locum tenens*, provided the approval of the Attorney-General is obtained before the trial.

Witnesses not being Crown witnesses are entitled to fees as follows:

(*a*) In the Supreme Court.—It is doubtful whether there is an applicable scale, but in practice the taxing master would probably follow the same scale as in civil cases in the Supreme Court.

(*b*) In Courts of Petty Sessions and before Justices and in General Sessions.—The same as in civil cases in courts of petty sessions.

In the Coroner's Court.

The fee for a medical witness summoned by the coroner is one guinea for attendance at each inquest, and if his place of residence is more than ten miles distant from the place where the inquest is to be held, a sum of one shilling for every mile of such extra distance in addition. The fee for a post-mortem examination directed by the coroner is two guineas.

A practitioner is not entitled to a fee for a report, but he could be subpœnaed and compelled to give evidence and would then be entitled to the fee above mentioned.

Where the death has happened in any public hospital, gaol or other public building, no medical officer appointed with salary to attend such hospital, gaol or building shall be entitled to any remuneration.

Fees for medical witnesses not summoned by the coroner are the same as in witnesses for the Crown in criminal cases.

Note.—Although judges and magistrates are usually willing to meet the convenience of medical men so that their time, as far as possible, will not be wasted, it must be remembered that every citizen is under an obligation to attend and give evidence when properly summoned, and the amount awarded as attendance fees is not to be regarded as necessarily equivalent to the value of the loss of time in attending the court.

Disclosure of Information Elsewhere than in Court Proceedings.

There is a moral and ethical obligation on medical practitioners debarring them from disclosing without the consent of their patients any information obtained in the course of their professional attendance, although there are certain statutory obligations which must be fulfilled; for example, the reporting of cases of notifiable infectious diseases.

Attention is directed to the common practice of life assurance companies asking for information regarding the previous health of a deceased policy-holder. Such information should not be supplied even if the company states that the deceased signed a general consent to disclosure in his proposal form, unless the written consent of the deceased's legal representatives has been obtained, and, even if that consent has been given, care should be taken to ensure that the deceased's representatives are fully cognizant of the possible effects disclosure might have on the beneficiaries' rights under the policy of insurance.

A medical practitioner has neither the right nor the duty to produce in court or elsewhere the official records of a person who has been a patient in an institution such as a public hospital. Those records are the property of the institution and should be produced only by an authorized officer of the institution on subpœna.

Medical Societies.

THE MEDICAL WOMEN'S SOCIETY OF NEW SOUTH WALES.

THE following report of the Secretary of the Medical Women's Society of New South Wales for the year 1940-1941 has been forwarded for publication.

The eleventh annual general meeting of the Medical Women's Society of New South Wales was held in the Assembly Room of the Women's Club, 167, Elizabeth Street, Sydney, at 8.30 p.m. on Wednesday, March 27, 1940.

The President, Dr. M. Edelsten-Pope, was in the chair. The annual report and balance sheet were presented and adopted.

Interesting addresses on their recent experiences abroad were given by Dr. Ella Windeyer, Dr. Jean Edelsten-Pope and Dr. Edna Nelson.

The second quarterly meeting of the Society was held in July and took the form of a symposium on the "Diagnostic and Therapeutic Uses of Ovarian Hormones". At this meeting the President announced that a *questionnaire* would be sent to members to collect information concerning their availability for civil and military duty. To this between 50 and 60 members replied, and the results were tabulated and the information obtained was made available to the Medical Secretary of the New South Wales Branch of the British Medical Association and to those seeking the assistance of members for various national services. The help of members in examining overseas children was offered to the Minister for Education.

Some members were appointed to the Advisory Committee of the Women's Auxiliary National Services and reported to the committee of this Society for discussion on matters affecting medical women.

Two lectures were given in July and August by Dr. K. Ardill-Brice and Dr. Frances McKay on "Methods of Teaching First Aid".

A clinical meeting was held at the Rachel Forster Hospital in August. Many interesting cases were shown.

Owing to the war situation it was decided to omit the usual annual dinner, and a late afternoon tea was held instead, in December. At this function members heard an address by Miss Maclean, who recently arrived from England as an escort to a party of overseas children.

Post-Graduate Work.

COURSE IN MEDICINE AT SYDNEY.

THE New South Wales Post-Graduate Committee in Medicine announces that a course suitable for (*a*) candidates for the M.R.A.C.P., or (*b*) general revision in medicine, will be held during the months of June and July, 1941, at the Prince Henry Hospital.

The course will include ward rounds on Monday, Wednesday and Thursday afternoons and Tuesday and Friday mornings. A library seminar will be held on the afternoon of the second Monday and a clinico-pathological conference on the afternoon of the fourth Monday in each month. At three week-ends during the period there will

be demonstrations in morbid anatomy, hæmatology, bacteriology and biochemistry, a special course in elementary electrocardiography (Saturday and Sunday, June 21 and 22) and special demonstrations in radiology, pulmonary tuberculosis, tropical diseases and the diseases of children. During the course demonstrations of the *fundus oculi* will be given, one at the Sydney Hospital (July 2) and the other at the Royal Prince Alfred Hospital (July 22). At the end of July a week-end course in medicine will be arranged and advertised.

Apart from the subjects indicated, if six or more persons register for the course, specially arranged lectures will be held. If a smaller number make application, these lectures will be given, but the subjects will be dealt with in a more informal manner.

Those who do not wish to take the whole course may register separately for the course in electrocardiography, the demonstrations of the *fundus oculi*, the week-end course in medicine and the course in diseases of children.

The fees (except for medical officers of the defence forces on full-time service, who are invited to attend the whole or any part of the course free of charge) are as under:

Full course	£10 10 0
Week-end course in electrocardiography ..	£2 2 0
Demonstrations of the *fundus oculi*, each ..	£1 1 0
Week-end course in medicine	£2 2 0
Course in diseases of children	£3 3 0

Applications for registration, accompanied by a remittance for the amount of the fee, must be made to the Secretary, New South Wales Post-Graduate Committee in Medicine, the Prince Henry Hospital, Little Bay.

Special Correspondence.

LONDON LETTER.

BY OUR SPECIAL CORRESPONDENT.

THE seventh International Genetical Congress, of which the *Proceedings* have just been published by the Cambridge University Press, was a peace-time gathering of the nations held in Edinburgh in the last week of August, 1939, and was probably the last of such international gatherings for decades to come. With a foresight which was uncanny the Russian delegates, including the Russian President-Elect, and only ten days before the opening of the congress, "regretted" their inability to attend, or, in their own words, "did not consider it possible to take part in the congress". Two days after the official opening the German delegates left *en masse*, the Scandinavians followed suit the following day, and the Americans made their own arrangements, some to find a watery grave in the *Athenia*. To quote the British President, Professor F. A. E. Crew, "our memories of this congress will make us even more fervent servants of peace and of scientific humanism".

The sentimentalist may be inclined to regard human genetics, however scientific, as a purely negative affair. Not so the Nazi. For him it affords a startlingly efficient and practical way of exterminating a nation. Witness the wretched Poland. Young men are sterilized; young women forcibly compelled to bear bastard children to Nazi fathers; those of their parents too old to work, shot, starved or otherwise destroyed. Of a race so treated there can soon be nothing left. Given the necessary control, as blasted from the skies by the *Luftwaffe* and as exercised by the present *Herrenvolk* of Hitler's Germany, one does not require any knowledge of genes, chromosomes, sex linkage or the like to realize the contemptuous ease with which a whole nation undesired by its conquerors can be eliminated from the face of the earth.

Practice makes perfect, and Germany has for several years past been trying out practical eugenics on its own oligophrenics, psychotics and undesirable mental aberrants, as has been fully described in the Press and by the German doctors themselves at an international congress held in Zürich some years ago. Having heard their descriptions at the congress, there is no room for doubt as to the thoroughness with which Nazidom practises its destructive forms of eugenics. Facts such as these, and they are facts, can hardly be too widely diffused amongst the medical profession and their friends and patients of a wider world. Thus they will realize the real meaning of the New Order Hitler seeks to establish in the countries of his unfortunate victims.

Between the "blitzed" cities of Britain and the still happily intact ones of the Commonwealth there would not appear to be any relationship, medical or otherwise. But there is, and a very pressing one too. The damage inflicted is no longer a secret of the censor. To describe streets and buildings is to convey little or nothing to Australians who have never seen them and can now no longer do so. Let Australian readers in Sydney, Melbourne, Adelaide or elsewhere, imagine Castlereagh, Pitt and George Streets, the whole of the city blocks around Collins, Bourke, Flinders and adjacent streets, and all the beautiful Adelaide terraces suddenly reduced to a mass of rubble, gaunt skeletons of once stately walls, steel girders of fantastic form and shape protruding to the skies like the bones of a disrupted giant, and they may form some idea of what war means today to the civilians of Britain and also to Germany itself. In the midst of many of these ruins in London and the provinces are the ashes of medical libraries and the priceless treasures of learned societies, and these it may possibly be the good fortune of Australia to replace from their stocks or surpluses. The Government of Victoria, amongst other State Governments, has more than once published expensive works for its learned societies, and of these it is hoped there may be surplus supplies. Learning, science and medicine have claims today on us all, and with the realization of the need perhaps this appeal to the medical profession of the Commonwealth may not be in vain. Save up your books, journals and periodicals for the better days to come. We shall want them.

Correspondence.

SOME MEDICAL ASPECTS OF CRIME.

SIR: Sir James Barrett's letter of January 20, commenting on medical aspects of crime, is very timely. Indeed it is a pity that the sciences relating to law and those relating to medicine were not more closely associated than they are today.

The fundamental truth that "the sins of the fathers are visited upon the children to the third and fourth generation" makes criminal law and criminology exact sciences—as exact as engineering or botany, with similar ordered ideas and scales of values.

There are but three qualifications to this: (i) Justice must be tempered with mercy. (ii) Every assistance should be given, and opportunity allowed our spiritual leaders and advisers, to bring about a change of heart in the individual to a life in Christ. (iii) Research in criminology should be promoted and encouraged.

Yours, etc.,

J. L. WHITWORTH.

Tasmania,
February 17, 1941.

SIR: The ascent by Dr. Reg. S. Ellery (April 5, 1941) into the realms of metaphysics has had a disastrous result, paralleled only by the historic expedition of Jack and Jill. Dr. Ellery has been generous enough to psychoanalyse Dr. Dane, and therefore he should not object to the practice of the method upon himself. It is obvious that his condition is the result of too intensive a concentration in early childhood upon the heroes of the nursery rhymes. Thus his crash from the metaphysical heights is symbolical of the fate of Humpty-Dumpty or Jack and Jill; his sympathy for the criminal symbolizes his early preoccupation with Taffy the Welshman or Robin Hood; and his faith in psychoanalysis as a means of reforming criminals can be explained by reference to the stories of childhood in which a magic formula was capable of changing animals into men (or *vice versa*).

Dr. Ellery's advocacy of the hoary fallacy that criminal acts are devoid of moral responsibility has led him into many lesser errors, of which I can mention only a few. Thus he implies that it cannot be right to give a dog a bad name; but plain commonsense tells us to give the dog a bad name if he really is bad. He denies that it is necessary for evil to be punished, though this necessity has been proved by human experience throughout the ages, both in the domestic and the public sphere, and has been sanctioned by all laws, human and divine. He asserts, without any shadow of proof, that psychoanalysis will cure all criminals; and he belabours and psychoanalyses his fellow psychoanalyst who has the effrontery to suggest that this theory (which is at best of doubtful truth) is not of sacramental value.

Dr. Ellery asserts that criminal conduct is the result of a childhood harassed by mental conflicts, domineering (and possibly drunken!) fathers, feelings of insecurity *et cetera*. He has told a small fraction of the truth, for associations in childhood do play an appreciable part in the moulding of character; but to exaggerate their effect is to deny validity to a dozen later and more important influences. It is as though he were to say that the movements of a sailing ship are guided by its keel (which was laid down first) and to forget its rudder, sail and anchor, the winds, the waves and the ocean currents.

Were our customs to be guided by the theories of the kind-hearted idealists who think that man cannot consciously do evil, we would be confronted by the spectacle of an American gunman being sentenced to psychoanalysis instead of the electric chair, or Dr. Crippen being asked if his father thrashed his mother (or *vice versa*). It would be permissible for a burglar to plead that he stole the pearls because his mother got drunk in '96, or that he stabbed his victim because his small brother used to stick pins into flies.

In those blessed days the policeman will be armed with a manual of psychotherapy instead of a truncheon, and his first question will be to ask the criminal if he was breast or bottle fed. The horrors of the present war will be blamed upon Herr Hitler's nurse and the arch-criminal himself will go down in history as a nice chap with a queer twist in his subconscious mind. The indignation we feel at the bombing of London can be traced to our subconscious anger against our own repressed wickedness, and increases our self-respect.

And so on. Let the subconscious be our totem!

Yours, etc.,

M. KELLY.

Bunbury,
Western Australia,
April 9, 1941.

BRITISH MEDICAL ASSOCIATION ASSISTANCE TO MEMBERS ON MILITARY SERVICE, BRISBANE.

SIR: As Chairman of the Trustees of the above scheme, I received a few days ago an anonymous letter signed "One of Many". At first the Trustees felt that like all anonymous letters this one should be ignored; but as the members of the scheme and the Trustees are bound by the agreement they signed, it was felt that an answer in the journal would be the correct procedure.

The writer brings up two points: first, the reduction of income due to taxation, and secondly, the fact that some of the men away are, with their pay and keep, better off than those at home.

In answer to the first statement, the practices which were carried on by those away are now spread over those remaining and as a fact the incomes of the majority of the members were increased this year. As the sum to be paid is estimated on the income after all taxes have been deducted, the increased taxation decreases the liability of the members.

As regards the inability of any members to pay, the Trustees are by the agreement allowed to reduce or remit any payment if they are satisfied that the condition warrants it.

Naturally, they have to have some evidence and have been satisfied with a personal interview with any Trustee.

Regarding the statement that some of those away are better off than those at home, such is probably correct; but the man away has left his practice and in many cases commitments and on his return will find only the commitments left; whereas the man staying has his practice, which should have increased.

The Trustees would like to draw attention to the clause in the agreement which gives the power of calling a meeting where such matters could be discussed.

At a meeting of the contributors held last November, when there were twenty-seven present, the Trustees were instructed to carry on as they had been doing.

Yours, etc.,

ALEX. H. MARKS,
Chairman of Trustees.

109, Wickham Terrace,
Brisbane,
April 5, 1941.

Naval, Military and Air Force.

APPOINTMENTS.

THE undermentioned appointments, changes *et cetera* have been promulgated in the *Commonwealth of Australia Gazette*, Number 73, of April 9, 1941.

CITIZEN NAVAL FORCES OF THE COMMONWEALTH.

Royal Australian Naval Volunteer Reserve.

Appointments.—Noel Walter Bartrop, Ernest Favenc Chin, Donald Murray Logier Finlay, Sinclair Elwyn Finlay, Edgar John Hardcastle, Laurence Stuart Hughes and Ewen Garth McQueen are appointed Surgeon Lieutenants (on probation), dated 31st March, 1941.—(Ex. Min. No. 23.)

AUSTRALIAN IMPERIAL FORCE (UNITED KINGDOM).

Australian Army Medical Corps.

To be Lieutenant-Colonels and to command Field Ambulances.—Majors M. L. D. McKeon and T. A. Parry, 26th June, 1940.

To be Majors.—Captains L. G. Hill, C. F. Marks and A. W. Robertson, 26th June, 1940.

To be Major (temporarily).—Captain M. T. Cockburn, 1st August, 1940.

AUSTRALIAN MILITARY FORCES.

AUSTRALIAN ARMY MEDICAL CORPS.

Northern Command.

First Military District.

Reserve of Officers.—To be Honorary Captain.—Arthur George Stening Cooper, 18th February, 1941.

Eastern Command.

Second Military District.

Captain L. E. Odlum is transferred to the Reserve of Officers (A.A.M.C.), 8th March, 1941. *To be Captains (provisionally).*—Dudley de la Force Henry, 14th July, 1940; Louis Leslie Harris, James Edward Grey Channon, 17th February, 1941; Ernest Favenc Paul Chin, Stanley Albert Bonnette, 18th February, 1941; Leslie Abramovich, 3rd March, 1941; William Thomas Hudson Scales, Jack Raymond Elliott, Derek Christopher Gordon Bracken, 4th March, 1941; Walter James Skinner, 6th March, 1941, and Charles Retchford, 7th March, 1941.

Reserve of Officers.—To be Honorary Captains—John William Follent, 17th February, 1941; James Winston Kent, 18th February, 1941; and Walter John Hull, 20th February, 1941.

Southern Command.

Third Military District.

Lieutenant-Colonel Sir H. G. Smith, V.D., from the Reserve of Officers (Inf.), is appointed to command a Casualty Clearing Station, 11th February, 1941; Honorary Captain E. Clarke is appointed from the Reserve of Officers (A.A.M.C.), and to be Captain (provisionally), 28th February, 1941; Captain N. McLeod is retired, 31st January, 1941.

Western Command.

Fifth Military District.

Honorary Captains W. A. Hillman and A. A. Merritt are appointed from the Reserve of Officers (A.A.M.C.) and to be Captains (provisionally), 22nd February, 1941, and 8th March, 1941, respectively. The name Norman Lewis Cass, which appeared in Executive Minute No. 175/1940, promulgated in *Commonwealth Gazette* No. 190, of 1940, is amended to read Namon Lewis Cass.

Reserve of Officers.—To be Honorary Captains—Richard Gregory Oldfield, 11th February, 1941, and Dudley Wolf Blitz, 21st February, 1941.

Seventh Military District.

N78854 Captain A. F. Smith is appointed from the Reserve of Officers (A.A.M.C.), 2nd Military District, 9th January, 1941; N75290 Captain N. M. Stewart is transferred from Australian Army Medical Corps, 2nd Military District, 9th January, 1941.

ROYAL AUSTRALIAN AIR FORCE.

Citizen Air Force: Medical Branch.

The following are granted commissions on probation with the rank of Flight Lieutenant with effect from 17th February, 1941: Archibald Keverall McIntyre, M.B., B.S., B.Sc., and Stuart MacKenzie Morson, M.B., B.S., B.Sc.—(Ex. Min. No. 48—Approved 4th April, 1941.)

WIRELESS TRANSMISSION APPARATUS (POSSESSION) ORDER.

THE following letter, received from Surgeon-Captain Carr, Director of Naval Medical Services of the Royal Australian Navy, in regard to the provisions of the Wireless Trans-

mission Apparatus (Possession) Order, recently issued, is published for the information of readers.

Sir: With reference to my letter 18190 of 8th April, and previous correspondence on the subject of the screening of high frequency electrical apparatus, I am now informed that no objection will be made to the use of unscreened electrical apparatus used for surgical purposes only in: (*a*) All public hospitals. (*b*) Those private hospitals in which the use of such apparatus is considered permissible by the Postmaster-General's Department.

Will you take steps to disseminate this information in any way you may consider advisable.

Yours, etc.,
W. G. CARR,
Surgeon Captain, R.A.N.,
Director of Naval Medical Services.

Navy Office,
Department of the Navy,
Melbourne, S.C.1.
April 17, 1941.

THE MEDICAL WAR RELIEF FUND.

THE following is a list of contributions to the Medical War Relief Fund established by the Federal Council of the British Medical Association in Australia for the relief of distressed medical practitioners in Great Britain (see THE MEDICAL JOURNAL OF AUSTRALIA, April 12, 1941, page 461).

New South Wales.

£50: Dr. Joseph Foreman.
£25: Sir Charles B. Blackburn.
£21: Dr. E. Murray-Will, Anonymous, Dr. G. M. Barron.
£20: Dr. M. B. McIlrath.
£10 10s.: Dr. Vivian Rich, Dr. W. F. Simmons, Anonymous, Dr. R. I. Furber, Dr. J. N. H. Wilson, Dr. P. L. Hipsley, Dr. H. R. G. Poate, Dr. K. C. T. Rawle, Dr. S. H. Scougall, Dr. E. A. Tivey, Dr. G. Bruce White, Dr. B. T. Edye, Dr. J. A. James.
£10: Anonymous, Dr. E. W. Fairfax.
£6: Dr. J. A. Dick.
£5 5s.: Dr. J. R. Allison, Dr. E. W. Rivett, Dr. W. L. Kirkwood, Dr. C. J. B. Armstrong, Dr. E. D. Clark, Dr. A. G. and Dr. M. E. Child, Dr. J. G. Edwards and Dr. H. M. Cutler, Dr. M. D. Harpur, Dr. J. A. Holt, Dr. C. B. Howse, Dr. R. Scot Skirving, Dr. A. R. Hamilton, Dr. C. C. McKellar, Dr. E. T. Thring, Dr. F. W. Doak, Dr. R. O. Williams, Dr. F. S. Hansman, Dr. I. H. MacGillivray, Dr. H. B. Cribb, Dr. S. L. Spencer, Dr. E. Trenerry, Dr. F. Brown Craig, Dr. G. C. Harper, Dr. Margaret H. Harper, Anonymous.
£5: Dr. A. S. D. Barton, Dr. C Purser, Dr. Hilton C. Smith, Dr. Richard G. S. Harris, Dr. A. D. Morgan, Dr. E. A. Marshman, Dr. H. A. F. Rofe, Dr. R. W. McCredie, Dr. W. H. Read, Dr. C. W. W. Murray.
£3 3s.: Dr. R. G. Arnott, Dr. W. M. A. Fletcher, Dr. F. H. Cox, Dr. Sydney George, Dr. H. Lister, Dr. J. H. Coles, Dr. E. A. C. Farran, Dr. Susie H. O'Reilly, Dr. K. S. M. Brown, Dr. G. G. Bradley, Dr. D. W. H. Arnott, Dr. J. B. F. McKenzie, Dr. H. W. Cuthbert, Dr. F. A. E. Lawes.
£3: Dr. E. F. Fisher.
£2 2s.: Dr. R. V. Bretherton, Dr. G. A. Brookes, Dr. G. W. Sinclair, Dr. F. L. Utber, Dr. C. C. P. Walker, Dr. Neil A. Gordon, Dr. A. C. Herrington, Anonymous, Dr. T. H. Small, Dr. H. S. Stacy, Dr. F. H. Watson, Dr. A. W. D'Ombrain, Dr. R. M. Glennie Holmes, Professor W. Keith Inglis, Dr. A. A. Lang, Dr. G. B. Morris, Professor C. G. Lambie, Dr. H. M. Hollingworth, Dr. H. D. Matthews, Dr. F. A. Burns, Dr. J. W. R. Hoets, Dr. A. R. Hunt, Dr. E. H. Molesworth, Sir Norman Paul, Dr. H. H. Schlink, Dr. C. W. Whiting, Dr. B. P. Anderson-Stuart, Dr. R. M. Glasson, Dr. E. L. Newman, Dr. K. I. Sillar, Dr. W. D. Quilty, Dr. H. A. Ryan, Dr. J. P. Hardie, Dr. N. E. McLaren, Dr. Bernard M. B. Riley, Dr. M. A. Schalit.
£2: Sir Norman W. Kater, Dr. R. G. V. Shaw, Dr. D. A. Williams.
£1. 1s.: Dr. G. L. O'Neill, Dr. R. M. Rawle, Dr. S. Shineberg, Dr. R. C. Winn, Dr. B. A. Cook, Dr. G. H. Hewitt, Dr. F. C. McCreadie, Dr. Cecil R. Sim, Dr. E. L. Morgan, Dr. T. F. Cowdroy, Dr. R. B. Holliday, Dr. Henry Peet, Dr. H. K. Porter, Dr. P. T. Thane, Dr. J. J. Woodburn, Dr. G. N. M. Aitkens, Dr. P. D. Braddon, Dr. J. V. Latham, Dr. S. J. Woolnough, Dr. C. G. Champion, Dr. T. J. Connelly, Dr. W. F. L. Liggins, Dr. W. Moppett, Dr. H. W. Charlton, Dr. N. C. Cunningham, Dr. C. F. Robinson, Dr. Ida Saunders, Dr. F. Smidlin, Dr. G. W. Ashby, Dr. L. Cowlishaw, Dr. Edith Clement, Dame Constance E. D'Arcy, Dr. S. G. Nelson, Dr. A. A. Palmer, Dr. Doris A. Selby, Dr. J. E. Wiseman.
£1: Dr. A. M. Davidson.
10s. 6d.: Dr. A. M. Purves.

Queensland.

£10: Dr. H. W. Savige (Brisbane).
£5 5s.: Anonymous, Dr. A. C. F. Halford (Brisbane), Dr. J. J. Luddy (Brisbane).
£5: Dr. E. W. F. Dolman (Brisbane).
£3 3s.: Dr. Max Berg (Brisbane).
£2 2s.: Dr. E. W. Chenoweth (Mackay), Dr. T. A. Price (Toowoomba).
£1 1s.: Dr. Phyllis Bodley (Toowoomba), Dr. R. N. Burton (Texas), Dr. Hugo Flecker (Cairns), Dr. A. M. Macdonald (Clermont).

Obituary.

KEITH RUSSELL MOORE.

WE are indebted to Dr. J. H. L. Cumpston, Director-General of Health, Commonwealth Department of Health, for the following account of the career of the late Dr. Keith Russell Moore.

Reference was made in the journal of March 15 to the death of Dr. K. R. Moore in the middle years of a life of service and usefulness. He died at Perth on March 1, 1941, following an illness of some two months.

Keith Russell Moore was born at St. Kilda, Victoria, on October 8, 1890. He was educated at Wesley College, Melbourne, and the University of Melbourne, graduating in February, 1915. Following a year at the Alfred, he had some eight months in general practice at Nhill and enlisted in March, 1917. A rheumatic condition debarred him from service overseas, but after a year at the Fifth Australian General Hospital he found what became the special interest of his career when he was appointed to the Military Sanatorium at Macleod. The interpretation of radiographs of the chest attracted him and he gained considerable experience in the three years he remained at Macleod, for the latter eighteen months as medical officer in charge. On April 5, 1921, he joined the Commonwealth Department of Health and was appointed quarantine officer at Port Adelaide.

In 1921 the Commonwealth Serum Laboratories had been functioning actively for three years, and Dr. W. J. Penfold had been joined by Dr. F. G. Morgan, the present director, and Dr. G. A. M. Heydon had gone to Rabaul to open the first of the Branch Commonwealth Health Laboratories. In July, 1922, Moore was transferred to the new laboratory at Bendigo, which in addition to routine diagnostic work, was equipped with X-ray facilities for the investigation of miner's phthisis then responsible for a tuberculosis death rate in Bendigo of 17 per 10,000, compared with a rate of 7 per 10,000 in Melbourne. Moore brought to this work a special experience and enthusiasm, and his examination of miners and their families was the basis of effective measures of control. During 1922-1923 he carried out in Bendigo, in collaboration with local authorities, the most extensive diphtheria campaign that had then been done in Australia. In all, 12,000 swabs were examined, upwards of 200 virulence tests performed, and Schick tests and active immunization involving nearly 7,000 inoculations were undertaken during 250 visits to schools in the municipality. He reported his findings to the Melbourne Congress of 1923 and in a service publication issued by the department.

In March, 1925, he was transferred to the Division of Industrial Hygiene which had been established in the Commonwealth Department of Health under the directorship of Dr. D. G. Robertson. Almost immediately he was appointed chairman of a royal commission appointed by the Government of South Australia to investigate the occurrence of cases of plumbism amongst employees at Port Pirie. The report, which was presented in July, 1925, not only made specific recommendations to deal with the problems encountered by the inquiry, but still repays study for its presentation of occupational hazards in the smelting industry. This was the first of a series of investigations made by Moore in the field of industrial hygiene, including, in 1927, dermatitis amongst Australian rubber workers, in 1928 a radiological survey of metalliferous mine-workers in Victoria and Tasmania, and in 1929 an examination of 500 coal-miners on the South Coast of New South Wales. In 1927 he obtained the Diploma of Public Health of the University of Melbourne.

In June, 1929, D. G. Robertson died suddenly and Moore succeeded him as Director of the Division of Industrial Hygiene. In 1930 he represented the Commonwealth as official delegate at the International Conference on Silicosis held at Johannesburg under the auspices of the International Labour Office. He presented a report on "Silicosis in Australia" and gave an account of work performed by himself on experimental silicosis.

The depression saw the end of the Division of Industrial Hygiene in April, 1932, and Moore was transferred to the post of medical officer in charge of the Commonwealth Health Laboratory, Kalgoorlie. Here his experience and interests were well served. Since 1925 W. T. Nelson had developed at this laboratory a system of examination, on behalf of the State Department of Mines, and under State legislation, of employees and applicants for employment in the metalliferous mines. Moore continued this work with enthusiasm, and what has been achieved for the industry was well brought out in his report which was published in this journal for January 22, 1938. In 1925, on the initial survey, the "silicosis with tuberculosis" percentage was 3·5; by 1938 this was reduced to 0·2. The "tuberculosis only" percentage was brought down from 0·3 to 0·1.

With this experience Moore probably had a wider knowledge of industrial pulmonary disease than anyone else in Australia. He had also a wide general knowledge of industrial conditions and hygiene. Like D. G. Robertson, who too died young, Moore was not given to publicizing his work. He seldom gave expression to the ideals which prompted his interest in his specialty; but he found a deep satisfaction when he had helped to overcome some occupational hazard. He enjoyed his association with miners and the individual contacts with men in all grades in the industry. When circumstances forced him from the wider activities of the Division of Industrial Hygiene to the narrower and more special work at Kalgoorlie, he was modestly proud of the achievements of the work in that field.

Keith Moore was a friendly person who loved his fellow men. A clubable soul, he enjoyed a keen game of cards and wielded a good cue. He played cricket until recent years and could, at times, bowl an unexpectedly good ball. A keen philatelist, he specialized in New Zealand stamps and could take good-humouredly the most ribald comments on his hobby. He won and retained the affection of his colleagues, who mourn the loss of a good companion and a fellow worker of high ability. Very deep sympathy will go out to Mrs. Moore and to his folk in Melbourne, who preserve a happy family circle, to which Keith Moore was always boyishly devoted.

REGINALD HORACE HILL.

We regret to announce the death of Dr. Reginald Horace Hill, which occurred on April 15, 1941, at Hawthorn, Victoria.

Nominations and Elections.

The undermentioned have applied for election as members of the New South Wales Branch of the British Medical Association:

Reye, Ralph Douglas Kenneth, M.B., B.S., 1937 (Univ. Sydney), Royal Alexandra Hospital for Children, Camperdown).

Cammack, William Frederick James, M.B., B.S., 1940 (Univ. Sydney), St. George District Hospital, Kogarah.

Todd, Margaret Joan Bronte, M.B., B.S., 1940 (Univ. Sydney), Sydney Hospital, Sydney.

The undermentioned have applied for election as members of the South Australian Branch of the British Medical Association:

Hains, Robert Myer, M.B., B.S., 1940 (Univ. Adelaide), Royal Adelaide Hospital, Adelaide.

Meredith, Mary Eva, M.B., B.S., B.Sc., 1939 (Univ. Melbourne), Northfield Infectious Diseases Hospital, Northfield.

Smith, William Arthur Rushbrook, M.B., B.S., 1939 (Univ. Adelaide), 61, East Terrace, Adelaide.

Wallman, Leigh Stuart, M.B., B.S., 1940 (Univ. Adelaide), 14, Balham Avenue, Kingswood.

Notice.

The New South Wales Post-Graduate Committee in Medicine announces that the next clinico-pathological conference arranged by the Post-Graduate Directors of Medicine, Surgery and Pathology will be held in the Lecture Hall at the Prince Henry Hospital, Little Bay, on Monday, April 28, 1941, at 4.30 o'clock p.m. The subject will be cases for diagnosis and discussion: (*a*) a case of jaundice, (*b*) a case of renal failure.

A cordial invitation to be present is extended to all medical practitioners.

Diary for the Month.

MAY 1.—South Australian Branch, B.M.A.: Council.
MAY 2.—Queensland Branch, B.M.A.: Branch.
MAY 6.—Queensland Branch, B.M.A.: Post-Graduate Committee.
MAY 6.—New South Wales Branch, B.M.A.: Organization and Science Committee.
MAY 7.—Western Australian Branch, B.M.A.: Council.
MAY 7.—Victorian Branch, B.M.A.: Branch.
MAY 9.—Queensland Branch, B.M.A.: Council.
MAY 9.—Victorian Branch, B.M.A.: Legislation Subcommittee.
MAY 13.—New South Wales Branch, B.M.A.: Executive and Finance Committee.
MAY 13.—Tasmanian Branch, B.M.A.: Branch.
MAY 15.—Queensland Branch, B.M.A.: Ipswich Hospital Clinical Society.
MAY 15.—Queensland Branch, B.M.A.: Hospital for Sick Children Clinical Society.
MAY 15.—Victorian Branch, B.M.A.: Ethics Subcommittee.
MAY 19.—Victorian Branch, B.M.A.: Hospital Subcommittee.
MAY 20.—New South Wales Branch, B.M.A.: Ethics Committee.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Honorary Secretary, 135, Macquarie Street, Sydney): Australian Natives' Association; Ashfield and District United Friendly Societies' Dispensary; Balmain United Friendly Societies' Dispensary; Leichhardt and Petersham United Friendly Societies' Dispensary; Manchester Unity Medical and Dispensing Institute, Oxford Street, Sydney; North Sydney Friendly Societies' Dispensary Limited; People's Prudential Assurance Company Limited; Phœnix Mutual Provident Society.

Victorian Branch (Honorary Secretary, Medical Society Hall, East Melbourne): Associated Medical Services Limited; all Institutes or Medical Dispensaries; Australian Prudential Association, Proprietary, Limited; Federated Mutual Medical Benefit Society; Mutual National Provident Club; National Provident Association; Hospital or other appointments outside Victoria.

Queensland Branch (Honorary Secretary, B.M.A. House, 225, Wickham Terrace, Brisbane, B.17): Brisbane Associated Friendly Societies' Medical Institute; Proserpine District Hospital; Bundaberg Medical Institute. Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL or position outside Australia are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.

South Australian Branch (Honorary Secretary, 178, North Terrace, Adelaide): All Lodge appointments in South Australia; all Contract Practice appointments in South Australia.

Western Australian Branch (Honorary Secretary, 205, Saint George's Terrace, Perth): Wiluna Hospital; all Contract Practice appointments in Western Australia.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

All communications should be addressed to the Editor, THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales. (Telephones: MW 2651-2.)

Members and subscribers are requested to notify the Manager, THE MEDICAL JOURNAL OF AUSTRALIA, Seamer Street, Glebe, New South Wales, without delay, of any irregularity in the delivery of this journal. The management cannot accept any responsibility or recognize any claim arising out of non-receipt of journals unless such a notification is received within one month.

SUBSCRIPTION RATES.—Medical students and others not receiving THE MEDICAL JOURNAL OF AUSTRALIA in virtue of membership of the Branches of the British Medical Association in the Commonwealth can become subscribers to the journal by applying to the Manager or through the usual agents and booksellers. Subscriptions can commence at the beginning of any quarter and are renewable on December 31. The rates are £2 for Australia and £2 5s. abroad *per annum* payable in advance.